

Meeting Date: August 22, 2007	Item Number: 2.A.
Subject: County Administrator's Comments	
County Administrator's Comments: County Administrator: Board Action Requested: No action required	
Summary of Information:	
Virginia was host to the 72 nd Annual Confe Association of Counties (NACo) held Convention Center.	
This year's conference coincided with to Settlement at Jamestown. More than 3,50 across the country attended the conference Chesterfield County and other localities success of the conference.	00 local government officials from rence. Over 400 volunteers from
Mr. Stegmaier will personally thank the Commonwealth of Virginia and share with to James D. Campbell, Executive Director Counties (see attached).	the volunteers an email received from
Preparer: Paul W. Mauger	Title: Fire Chief
Attachments: Yes No	# 000001

Page 2 of 2

Thank you. . . Thank you! . . Thank you!

You "purple shirted people greeters" were absolutely terrific !!!!

Your friendly smiles, your warm welcomes, your helpful attitudes were the talk of the conference. From my experience with more than 20 NACO conferences, I have never heard such raving compliments about the hospitality and friendliness of the host community. Thanks to you, the greater Richmond Region....and Virginia, "raised the bar" and set a new standard for this national conference.

On behalf of the Virginia Association of Counties, thank you for making the 2007 NACo Conference a tremendous success.

Jim

James D. Campbell Executive Director Virginia Association of Counties 1001 E Broad St Suite LL20 Richmond, VA 23219

jcampbell@vaco.org

I removed Brian Old (Internal Audit from this list) as he did

Department	Police	4813 Village Lake Drive, Richmond, VA 23234	Internal Audit	10633 Honey Tree Road, Richmond, VA 23235	Fire	5802 Harbour Bluff Terrace, Midlothian, VA 23112	Fire	Social Services	Chesterfield University	Security Management	1020 Meadowcreek Drive, Richmond, VA 23236	Juvenile Detention	1020 Meadowcreek Drive, Richmond, VA 23236	Risk Management	Youth Planning & Dev	County Attorney's Office
Employee	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Locality	Chesterfield County	Chesterfield County	Chesterfield County	Chesterfield	Chesterfield County	Chesterfield County	Chesterfield County	Chesterfield County	Chesterfield County	Chesterfield County	Chesterfield	Chesterfield County	Chesterfield	Chesterfield County	Chesterfield County	Chesterfield County
Email	adamsr@chesterfield.gov	agnbon@juno.com	ariails@chesterfield.gov	DEAN.LYNCH@COMCAST.NET	cargodoc@earthlink.net	mbbland@comcast.net	boatwrightj@chesterfield.gov	branchp@chesterfield.gov	brunyk@chesterfield.gov	bushn@chesterfield.gov	jquiraing@comcast.net	campbellj@chesterfield.gov	ktquiraing@comcast.net	carpenterja@chesterfield.gov	carterj@chesterfield.gov	chernaum@chesterfield.gov
Volunteer	Becky Adams	Bonnie Agnell	Sherry Ariail	Lynne Astroth	Richard Bidwell	Maribeth Bland	John Boatwright	Peggy Branch	Kevin Bruny	Nancy Bush	James Campbell	Joe Campbell	Katie Campbell	James Carpenter	Jana Carter	Michael Chernau

8/1/2007

000003

	Email Email cov	Locality County	Employee	Department Department Department
	anc@cnesternera.gov	Chesterneid County	res	Kisk Management
cliftonr	cliftonr@chesterfield.gov	Chesterfield County	Yes	Environmental Engineering
Condi	CondreyBA@Chesterfield.gov	Chesterfield County, VA	Yes	IST
conle	conleyk@chesterfield.gov	Chesterfield County	Yes	County Administration
cruzi(cruzi@chesterfield.gov	Chesterfield County	No	10013 Palace Court, Apt. B, Richmond, VA 23238
culler	cullenp@chesterfield.gov	Chesterfield County	Yes	Mental Health
curtir	curtinm@chesterfield.gov	Chesterfield County	Yes	Intergovernmental Relations
dalto	daltons@chesterfield.gov	Chesterfield County	Yes	Fire
dudle	dudleys@chesterfield.gov	Chesterfield County	Yes	Risk Management
duke	dukek@chesterfield.gov	Chesterfield County	Yes	Fire
debo	debdzama@aol.com	Chesterfield County	Yes	Accounting
eane	eanesr@chesterfield.gov	Chesterfield County	Yes	Security Management
epue	ebnert@chesterfield.gov	Chesterfield County	Yes	Environmental Engineering
edin	edingerr@chesterfield.gov	Chesterfield County	Yes	Fire
eko	elkol@chesterfield.gov	Chesterfield County	Yes	Clerk to the Board
from	fromalm@chesterfield.gov	Chesterfield County	Yes	Police
galu	galushaj@chesterfield.gov	Chesterfield County	Yes	County Admin
Garr	Garrettj@chesterfield.gov	Chesterfield County	Yes	Risk Management

Volunteer	Email	Locality	Employee	Department
Rosalyn Gibson	gibsonr@chesterfield.gov	Chesterfield County	Yes	Social Services
Barbara Glick	glickb@chesterfield.gov	Chesterfield County	Yes	Library
Demeatra Grammer	grammerd@chesterfield.gov	Chesterfield County	Yes	Social Services
John Gregory, Jr.	Gregoryj@chesterfield.gov	Chesterfield County	Yes	Real Estate Assessor
William Handley	handleyw@chesterfield.gov	Chesterfield County	Yes	Planning
Mike Harmon	harmonm@chesterfield.gov	Chesterfield County	Yes	Fire
Mary Beth Henry	henrym@chesterfield.gov	Chesterfield County	Yes	Public Affiars
Jeff Howard	howardjt@chesterfield.gov	Chesterfield County	Yes	Security Management
Bonnie Johnson	johnsonbs@chesterfield.gov	Chesterfield County	Yes	Building Inspection
Christy Johnson	Johnsonc@chesterfield.gov	Chesterfield County	Yes	Risk Management
Carol Judkins	judkinsc@chesterfield.gov	Chesterfield County	Yes	Budget
Francis J. Kinnier, Jr.	KinnierF@chesterfield.gov	Chesterfield County	Yes	Fire
Michael Kozak	kozakm@chesterfield.gov	Chesterfield County	Yes	County Attorney's Office
Mary Kruse	krusem@chesterfield.gov	Chesterfield County	Yes	Committee on the Future
Tony Leone	leonet@chesterfield.gov	Chesterfield County	Yes	Budget
Faye Lewis	lewisf@chesterfield.gov	Chesterfield County	Yes	Security Management
Rachael Lumpkin	lumpkinr@chesterfield.gov	Chesterfield County	Yes	Utilities

Volunteer	Email	Locality	Employee	Department
Mary Lou Lyle	lylem@chesterfield.gov	Chesterfield County	Yes	Accounting
Jackie Lynch	dean.lynch@comcast.net	Chesterfield	No	10633 Honey Tree Road, Richmond, VA 23235
Doug Malaspino	malaspinod@chesterfield.gov	Chesterfield County	Yes	Security Management
Karen Mann	krazyrabbit@gmail.com	Chesterfield County	Yes	Library
Reenie Marshall	reeniepm@verizon.net	Chesterfield County	No	2750 S. Netherfield Drive, Midlothian, VA 23113
Sam Marshall	sam@marshall-assoc.com	Chesterfield County	No	2750 S. Netherfield Drive, Midlothian, VA 23113
Paul Mauger	maugerp@chesterfield.gov	Chesterfield County	Yes	Fire
Ted McCormack	tmccormack@vaco.org	Chesterfield County	No	1001 E. Main Street, Suite L1 20, Richmond, VA 23219
Trina McCoy	mccoyt@chesterfield.gov	Chesterfield County	Yes	Social Services
Tara McGee	mcgeet@chesterfield.gov	Chesterfield County	Yes	County Attorney's Office
Steve Micas	micass@chesterfield.gov	Chesterfield County	Yes	County Attorney's Office
Jeff Mincks	mincksj@chesterfield.gov	Chesterfield County	Yes	County Attorney's Office
Diane Monahan	monahand@chesterfield.gov	Chesterfield County	Yes	Social Services
Kurt Mueller	muellerk@chesterfield.gov	Chesterfield County	Yes	Fire
Curt Nellis	nellisc@chesterfield.gov	Chesterfield County	Yes	Fire
Barbara Olsen	olsenb@chesterfield.gov	Chesterfield County	Yes	Intergovernmental Relations
Karyn Padgett	padgettks@chesterfield.gov	Chesterfield County	Yes	Mental Health
David Palumbo	dlp0101@comcast.net	Chesterfield County	Yes	Fire (retired)

Volunteer	LIII	Locality		
Nancy Parker	parkern@chesterfield.gov	Chesterfield County	Yes	Env. Engineering
Stylian Parthemos	parthemoss@chesterfield.gov	Chesterfield County	Yes	County Attorney's Office
Robert Poland	Chopcop1@aol.com	Chesterfield County	Yes	Sheriff (left 6.29.07)
Powell	powellh@chesterfield.gov	Chesterfield County	Yes	Social Services
Martha Reiss	reissm@chesterfield.gov	Chesterfield County	Yes	Budget
Rob Robinson	robinsonr@chesterfield.gov	Chesterfield County	Yes	County Attorney's Office
	rohrj@chesterfield.gov	Chesterfield County	Yes	Quality
Lavonda Rowe	rowel@chesterfield.gov	Chesterfield County	Yes	County Attorney's Office
Hagen Royall	royallb@chesterfield.gov	Chesterfield County	Yes	Social Services
	ruthc@chesterfield.gov	Chesterfield County	Yes	Public Affiars
	fitzgeralds@chesterfield.gov	Chesterfield County	Yes	IST
Warren Seay	seayw@chesterfield.gov	Chesterfield County	Yes	IST
William Smith	emaasmith@access4less.net	Chesterfield County	Yes	Fire
Debbie Stone	Stoned@Chesterfield.gov	Chesterfield County	Yes	Budget
Cindy Taylor	taylorc@chesterfield.gov	Chesterfield County	Yes	Chesterfield University
Thysell	thysell@comcast.net	Chesterfield County	Yes	IST
Chuck Tomlinson	cgtomlinson@verizon.net	Chesterfield County	No	2310 Garrison Place Road, Midlothian, VA 23112

000007

Volunteer	Email	Locality	Employee	Department
tren	tremblayj@chesterfield.gov	Chesterfield County	Yes	Social Services
Ħ	tuckert@chesterfield.gov	Chesterfield County	Yes	Fire
ug	ngoziukeje@comcast.net	Chesterfield County	Yes	Disability Services Board
۸a	vaughanp@chesterfield.gov	Chesterfield County	Yes	Social Services
š	wellsj@chesterfield.gov	Chesterfield County	Yes	Chesterfield University
Д	Pamlitescandles@aol.com	Chesterfield County	Yes	Treasurer
5	wrighta@chesterfield.gov	Chesterfield County	Yes	Utilities
3	wrightt@chesterfield.gov	Chesterfield County	Yes	County Administration
L				
≥	wrightw@chesterfield.gov	Chesterfield County	Yes	Utilities
Z	yuhasek@chesterfield.gov	Chesterfield County	Yes	Accounting
za	zammettj@chesterfield.gov	Chesterfield County	Yes	Social Services



Meeting Date: Augus	t 22, 2007	Item	Number: 2.	B.	
Subject: County Administrator	's Comments				,
County Administrator's C	omments:				
Board Action Requested:					
Summary of Information A presentation will Chesterfield County.	be given by s	taff regarding	the drough	t conditions	in
Preparer: <u>Lisa Elko</u>		Title: <u>Clerk t</u>	o the Board		
Attachments:	Yes	No		# 000009	

Meeting Date:	August 22, 2007		Item Numbe	∍r: 5.A.
Subject: Resolution Rec	cognizing Mr. La	ne B. Ramsey,	County Administr	rator, Upon His
Retirement				
County Administr	rator's Comments:			
County Administr	rator:			
Board Action Rec	uested:			
Adoption of at	tached resolution	on.		
Summary of In	formation:			
Administrator, Chesterfield accountant in of accounting, county administrations	Dpon His Reti County for 35 y 1972 and rose the budget director strator before b	rement. Mr. rears. He began rough the ranks of budget and accepting appointed of Chesterfield	ze Mr. Lane F Ramsey served to an work with the s, serving as ass counting director as county admir d County are many ome.	he citizens of e county as an eistant director c, and assistant nistrator. His
Preparer: <u>Marilyn</u>	Cole	Title: <u>Assista</u>	ant County Administra	<u>ator</u>
Attachments:	Yes	No		# 000010

RECOGNIZING MR. LANE B. RAMSEY UPON HIS RETIREMENT

WHEREAS, Mr. Lane B. Ramsey was first employed by Chesterfield County as an accountant in January 1972 after having served honorably in the U.S. Army, including two tours of duty in Vietnam; and

WHEREAS, Mr. Ramsey was appointed as Assistant Director of Accounting in March 1974; three years later, he was promoted to Director of Budget; became director of Budget and Accounting when the two departments were consolidated in May 1981; and was reclassified as Assistant County Administrator for Budget and Staffing in January 1987; and

WHEREAS, in April 1987, Mr. Ramsey was appointed as acting County Administrator by the Board of Supervisors; and in September 1987, when Chesterfield County had a population of 181,500, Lane B. Ramsey was appointed as County Administrator, and held that position until August 13, 2007; and

WHEREAS, during his 20 years as County Administrator, Mr. Ramsey has successfully worked with many Board of Supervisors members, and with wisdom and dedication, has managed the day-to-day operations of a vibrant, growing county that now is home to 306,000 residents, and has overseen an extensive list of award-winning county government services and programs; and

WHEREAS, under his direction, Chesterfield County has earned a national reputation as a desirable, well-managed, diverse, innovative locality that is a leader among local governments in America; and

WHEREAS, Mr. Ramsey's leadership has been instrumental in building a financial system that is one of the finest in the country, resulting in Chesterfield County's attainment and retention of AAA bond ratings from Standard and Poor's, Fitch and Moody's, the nation's three foremost bond-rating agencies, a distinction held by fewer than two dozen of the nation's local governments; and

WHEREAS, because of Mr. Ramsey's emphasis on total quality and customer service, in 1994, Chesterfield County was awarded the U. S. Senate Productivity and Quality Award, and followed this with being selected twice for the Award for Continuing Excellence; and

WHEREAS, Mr. Ramsey has worked with five Superintendents of Schools to help build one of the best school systems in the nation, which is now one of the largest in Virginia with more than 60,000 students; and

WHEREAS, Mr. Ramsey has been devoted to Chesterfield County employees, particularly to their training and development needs, and was instrumental in creating a learning organization through the development of Chesterfield University; and

WHEREAS, a strong indicator of a locality's true success is how its residents feel about it; and

WHEREAS, Citizen Satisfaction Surveys have consistently shown that nine out of ten Chesterfield County residents rate the county's quality of life as "good" or "excellent," and find the county to be safe and a wonderful place to raise their families; and

WHEREAS, CNN/Money magazine named the county the " $16^{\rm th}$ Best Place to Live in America"; and

WHEREAS, Mr. Ramsey's leadership has garnered similar kudos and respect for the county from the business community, as evidenced by the results of the county's Business Satisfaction Survey; and

WHEREAS, Lane B. Ramsey's national reputation for leadership in local government led to his selection as the winner of the prestigious 1997 National Public Service Award from the National Academy for Public Administration; and

WHEREAS, a hallmark of Mr. Ramsey's tenure has been his strong commitment to regional cooperation, as evidenced by his service on the boards of the Greater Richmond Convention Center Authority, which he chaired in 2002 and again in 2007; the Appomattox River Water Authority, which he currently chairs; the South Central Regional Sewer Authority, for which he also served as secretary and treasurer; along with serving as chair of the University of Virginia's Institute of Government Advisory Committee; and also past service in a variety of other state and regional organizations; and

WHEREAS, during his tenure, the county adopted its first annual budget to top \$1 billion; experienced more than \$2.5 billion in business investments, including welcoming Northrop Grumman as the largest business investor in the county's history; was twice named "One of the 100 Best Communities for Young People" by America's Promise—The Alliance for Youth; became the second locality in the nation to achieve ISO 14001, the international standard for environmental management systems; was recognized several times for its leadership commitment to its employees serving in the reserve components of the U. S. military; and attained vast numbers of other awards and instances of special recognition; and

WHEREAS, Mr. Ramsey retired on August 13, 2007; and

WHEREAS, it is unlikely that any one person will ever again exert the insightful, long-tenured and exemplary leadership of Chesterfield County that has exemplified Lane B. Ramsey's service.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors, this 22nd day of August 2007, publicly extends to Mr. Lane B. Ramsey the sincere appreciation of the residents and business community of Chesterfield County, and conveys to Mr. Ramsey and his wife, Paula, all best wishes for a long, well-deserved and happy retirement.

AND, BE IT FURTHER RESOLVED that, in recognition of his outstanding leadership, the Board of Supervisors has directed that the county's Main Administration Building be named the Lane B. Ramsey Administration Building in honor of Mr. Lane B. Ramsey, who served as County Administrator for twenty years.

AND, BE IT FURTHER RESOLVED that this resolution be presented to Mr. Ramsey in recognition of his outstanding public service from January 1972 until August 13, 2007.

Meeting Date:	August 22, 2007	Item Number: 5	5.6.
Subject: Resolution Reco	ognizing Firefighter Douglas	K. Hanky, Chester	rfield Emergency
and Medical Se	rvices Department, Upon His R	-	
County Administra	ator's Comments:		
County Administra	ator:		
Board Action Req	uested:		
Adoption of rea	solution.		
Summary of Info	ormation:		
Chesterfield E	nesting the recognition of mergency and Medical Services ice to the citizens of Cheste	Department, for	-
Preparer: <u>Matth</u>	new A. Coffin Ti	tle: <u>Lieutenant-Comn</u>	nunity Programs
Attachments:	Yes No		# 000013

RECOGNIZING FIREFIGHTER DOUGLAS K. HANKY UPON HIS RETIREMENT

WHEREAS, Firefighter Douglas K. Hanky will retire from the Fire and Emergency Medical Services Department, Chesterfield County, on September 1, 2007; and

WHEREAS, Firefighter Hanky attended Recruit School #10 in October of 1979 and has faithfully served the county for nearly twenty-eight years in various assignments as a Firefighter-Paramedic at the Buford, Chester, Dale, Dutch Gap, Ettrick, Matoaca, and Rivers Bend Fire and EMS Departments; as a Flight Medic with Medflight One-Virginia State Police; and as a Fire-Public Educator in the Fire and Life Safety Division of the Fire and EMS Department; and

WHEREAS, Firefighter Hanky was a member of one of the first flight crews in the establishment of Medflight 1, a collaboration between the Fire and EMS Department and Virginia State Police, on April 1, 1984; and

WHEREAS, Firefighter Hanky was recognized as an effective team member at emergency scenes, including key tactical positions that prevented the spread of fire and loss of life where lives and property were at risk; and

WHEREAS, Firefighter Hanky was recognized on October 6, 1998 with a Fire and EMS Unit Citation for his role in the rescue of three individuals, one of whom was pregnant, from a capsized canoe in the Appomattox River; and

WHEREAS, Firefighter Hanky was recognized on March 28, 2000 for his role in the successful resuscitation and treatment of a female patient in cardiac arrest who was treated and later released from the hospital; and

WHEREAS, Firefighter Hanky was responsible for the successful delivery of a newborn baby girl in April of 2000, during a emergency medical incident in a Matoaca residence; and

WHEREAS, Firefighter Hanky has had an active role in the education of well over 6,000 elementary school students, and countless numbers of employees, adults, and senior citizens as a public educator; and

WHEREAS, Firefighter Hanky is certified as a Juvenile Firesetter Intervention Specialist with the National Fire Academy and has been instrumental in the counseling of Juvenile Fire Setters and troubled children; and

WHEREAS, Firefighter Hanky has led the delivery of the Cadet Safety Camp, a collaborative effort by the Fire, Police, and Sheriff's office, for three consecutive years, providing safety training to a total of 178 children in that period; and

WHEREAS, Firefighter Hanky has been recognized repeatedly by teachers, students, and parents with the Chesterfield County Public School system for his dedication and delivery of fire and life safety education.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors, this 22^{nd} day of August 2007, publicly recognizes the contributions of Firefighter Douglas K. Hanky, expresses the appreciation of all residents for his service to the county, and extends appreciation for his dedicated service and congratulations upon his retirement.

AND, BE IT FURTHER RESOLVED that a copy of this resolution be presented to Firefighter Hanky, and that this resolution be permanently recorded among the papers of this Board of Supervisors of Chesterfield County, Virginia.



Meeting Date: A	August 22, 2007	lt	em Number: 5,	.c.	سی
Subject:					
Resolution Reco of the Revenue,		andra W. Coleman, rement	Office of the	. Commissioner	
County Administra	tor's Comments:				
County Administra	tor:				
Board Action Requ	ıested:				
Adoption of the	attached reso	lution.			
	Coleman will re f the Revenue	etire from the Che after providing			
Preparer: <u>Joseph</u>	A. Horbal, MCR	·····	Title: Commissio	oner of the Revenu	<u>зе</u>
Attachments:	Yes	No		# 000016	

RECOGNIZING MRS. SANDRA W. COLEMAN UPON HER RETIREMENT

WHEREAS, Mrs. Sandra W. Coleman will retire from the Office of the Commissioner of the Revenue on August 31, 2007; and

WHEREAS, Mrs. Coleman began her public service with the county as a clerk-typist in the Office of the Commissioner of the Revenue on February 1, 1979, and has faithfully served Chesterfield County for twenty-eight and one-half years; and

WHEREAS, Mrs. Coleman, through hard work and dedication, progressed from the position of clerk-typist to her current position of administrative supervisor; and

WHEREAS, Mrs. Coleman grew with the office and demonstrated flexibility and the highest level of service while displaying dedication to three different commissioners over her tenure; and

WHEREAS, Mrs. Coleman, when met with sensitive situations, was able to respond in a professional and confidential, yet caring, manner; and

WHEREAS, Mrs. Coleman was able to take a job with often complex duties and make it seem simple; and

WHEREAS, Mrs. Coleman's vast knowledge, years of experience, and tireless dedication to supporting and achieving the goals and objectives of the Office of the Commissioner of the Revenue have enabled her to make a significant contribution to the success of this office; and

WHEREAS, more than anything else, Mrs. Coleman has been a loyal friend to many, often a guidance counselor of sorts to the department, even humorously unpredictable, but with a friendly and caring attitude that will be sorely missed.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors, this 22^{nd} day of August 2007, publicly recognizes the contributions of Mrs. Sandra W. Coleman to the citizens and administration of Chesterfield County; and extends appreciation for her commitment to the county, congratulations upon her successful career, and best wishes for a long and happy retirement.

AND, BE IT FURTHER RESOLVED that a copy of this resolution be presented to Mrs. Coleman, and that this resolution be permanently recorded among the papers of this Board of Supervisors of Chesterfield County, Virginia.

Meeting Date:	August 22, 2007	Item Number:	5. D.
Subject: Recognition of	2007 NACo Achie	vement Award Winners	
County Administra	itor's Comments:		
County Administra	ıtor:		
Board Action Requ	<u>ıested:</u>		
Summary of Info	ormation:		
Achievement Awards this year	ards from the Nat nce that Chesterf ar. Public Affa:	ors recognizes county departmentation of Counties ional Association of Counties ield County is the recipient irs also received 11 awards ion Officers (NACIO).	s (NACo). We are of 8 Achievement
Representatives awards (see att		opriate departments are pr	esent to receive
Preparer: Marilyn E	E. Cole	Title: Assistant County Adn	<u>ninistrator</u>
Attachments:	Yes	No	# 000018

2007 NACo ACHIEVEMENT AWARDS Chesterfield County, Virginia 16 Submitted – 8 Winners

DEPARTMENT PROJECT

Circuit Court

Judy Worthington Web-Based Marriage License Application

Fire Department

The Citie of Henricus: Providing 21st Century Fire Protection in 16th Century Buildings Francis Kinnier, Jr.

Accelerated Emergency Medical Technician -Joe Newsome

Intermediate Course

Human Resource Management

Margaret Brogley Year of the Older Adult Family Worklife Program

Library

Michael Mabe "So Many Books...So Little Time" Readers' Advisory:

Connecting Books & Readers

Mental Health Support Services

Mental Health Peer-Provider Program Larry Barnett

Police Department

Mary Garber Cadet Safety Camp

Utilities Department

Fred Angel Identifying the Cost of Customer Services



Meeting Date:	August 22, 2007	Item Numbe	r: 8.A.1.
Subject:			
Nomination/App	pointments to Various E	soards and Commissions	
County Administr	rator's Comments:		
County Administr	rator:		
Board Action Red	<u>uested:</u>		
Summary of In	formation:		
	ointments are needed to	Ramsey as County Admin various Boards and Comm	
Preparer: <u>Li</u>	sa H. Elko	Title: Clerk to the Board	
Attachments:	Yes	No	# 000020
			00000

BOARD APPOINTMENTS

GREATER RICHMOND PARTNERSHIP

Unspecified Term

Mr. Jay Stegmaier, Alternate

SOUTH CENTRAL WASTEWATER AUTHORITY BOARD

Unspecified Term

Mr. Jay Stegmaier



Meeting Date: August 22, 2007	Item Number: 8.A.2.
Subject:	
Nominations/Appointments to the Youth Services Co	itizen Board
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
Nominate/appoint members to serve on the Youth Se	ervices Citizen Board.
Summary of Information:	
The purpose of the Youth Services Citizen Board (You of Supervisors regarding planning and policies and to provide a community forum to focus on you	affecting youth development
Matoaca District Supervisor Humphrey recommends that the Board of Hall, an adult from the Matoaca District, to the State of the Tor a term from July 1, 2007 through June 30, 200	Youth Services Citizen Board
Ms. Hall meets all eligibility requirements to indicated her willingness to serve.	fill the vacancy and has
Preparer: <u>Jana D. Carter</u> Title: <u>Director,</u>	Juvenile Services
Attachments: Yes No	000022

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Bermuda District

Supervisor King recommends that the Board nominate and appoint **Christian Garland**, a student at Thomas Dale High School, to the Youth Services Citizen Board for a term from July 1, 2007 through June 30, 2008.

Mr. King also recommends that the Board nominated and appoint Mark D. Waitkus, an adult from the Bermuda District, to the Youth Services Citizen Board for a term from July 1, 2007 through June 30, 2010.

Ms. Garland and Mr. Waitkus meet all eligibility requirements to fill the vacancies and have indicated their willingness to serve.

Under existing Rules of Procedure, appointments to boards and committees are nominated at one meeting and appointed at the subsequent meeting unless the Rules of Procedure are suspended by a unanimous vote of the Board members present. Nominees are voted on in the order in which they are nominated.



Attachments:

CHESTERFIELD COUNTY BOARD OF SUPERVISORS AGENDA

Page 1 of 1

000024

Meeting Date: Aug	ust 22, 2007	Item Nur	mber: 8.A.3.	
Subject:				
Initial Appointment Authority Board	its to the Lower	Magnolia Green	Community Developm	ent
County Administrator's	Comments:			
County Administrator:				
_		_	dividuals to the Lo	wer
 Deborah Girvi Robert M. (Ma Worth (Buddy) 	esident, Heinz Insu n, Vice President o c) Bullock, Directo Whitfield, IBM; and , Brig. General U.S	f Human Resource r of Operations, d		
to consider a per Development Author ordinance, this its serve on the Lower Articles of Incorp detail the powers a appointment have a	today's agenda requestition to create ity, and adopt a reem requests the Boar Magnolia Green Commoration of the CDA and duties of the CDA	the Lower Magnated ordinance. rd to appoint the nunity Developmen (approved as part). The interminant initial term	part of the ordinandividuals presented of four (4) years.	ity the to The ce)
nominated at one m	eeting and appointed	d at the subsequ	ards and committees went meeting unless e of the Board memb	the
Preparer: Rebecca T. D)ickson	Title: Deputy Cour	nty Administrator	

Yes



Meeting Date: August 22, 2007	Item Number: 8.	A.4.
Subject:		
Nomination/Appointment to the (Community Criminal Justice Boa	rd
County Administrator's Comments:		
County Administrator:		
Board Action Requested: It is requested that the Chester following nominee for appoint (CCJB) for the remainder of a of the Community Criminal of prescribed positions in the Community Community Criminal of the Community Crimi	ment to the Community Crimina two-year term according to the Justice Board. Appointments	l Justice Board adopted by-laws
Summary of Information:		
The Community Criminal Justice Court consisting of Chesterfiel purpose is to provide for the community programs and service local correctional facilities.	d County and the City of Colon: ne development, evaluation as	ial Heights. The nd planning of
At the June 14, 1995 Meeting, to Resolution Providing for the I Corrections Act (CCCA) and the the Chesterfield County and C Justice Board; and provisions to	mplementation of the Comprehe Pretrial Services Act (PSA); E City of Colonial Heights Comm	nsive Community Establishment of
The resolution designated the Mof Virginia. The Community Crimstaggered terms; thus ten members	ninal Justice Board members ser	-
Preparer: Rebecca T. Dickson	Title: Deputy County Admir	<u>nistrator</u>
Attachments: Yes	No	000025

Page 2 of 2

It is requested the following individual be appointed to serve the remainder of a two-year appointment that began July 1, 2006 and ends June 30, 2008.

Colonel Thierry G. Dupuis

(Citizen Appointment)

Under the existing Rules of Procedure, appointments to Boards and Committees are nominated at one meeting and appointed at the subsequent meeting unless the Rules of Procedure are suspended by a unanimous vote of the Board members present. Nominees are voted on in the order in which they are nominated.



Chesterfield County, Virginia

Lane B. Ramsey, County Administrator 9901 Lori Road – P.O. Box 40 – Chesterfield, VA 23832-0040 Phone: (804) 748-1211 – Fax: (804) 717-6297 – Internet: chesterfield.gov

BOARD OF SUPERVISORS

KELLY E. MILLER Chairman Dale District

Matoaca District

RENNY BUSH HUMPHREY Vice Chairman

R. M. "DICKIE" KING, JR. Bermuda District

ARTHUR S. WARREN

DONALD D. SOWDER Midlothian District

TO: Honorable Members, Board of Supervisors

Jay Stegmaier, County Administrator

FROM: Rebecca T. Dickson, Deputy County Administrator for Human Services

DATE: August 14, 2007

SUBJECT: Community Criminal Justice Board (CCJB) Appointment

It is requested that nominee, Colonel Thierry G. Dupuis be appointed to the Community Criminal Justice Board (CCJB) for the remainder of a two-year term that runs from July 1, 2006 through June 30, 2008. The nominee would fill one of the two Chesterfield citizen positions on the CCJB that was vacated by the retirement of Colonel Baker.

Colonel Dupuis has indicated his willingness to serve if appointed and the Community Criminal Justice Board is recommending him. Nominees are also reviewed and appointed by the Colonial Heights City Council since each appointee must be approved by both localities.



Meeting Date: August 22, 2007	Item Number: 8.A.5.
Subject:	
Appointment of Trustees to the Supplement	ental Retirement Plan (Plan)
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
The Board of Supervisors is requested Supplemental Retirement Plan.	d to appoint a new Trustee to the
Summary of Information: The Plan provides supplemental retireme management and leadership positions. Trustees is to administer the Plan Participants and their Beneficiaries, Plan. The Trustees shall have the power of the Plan and to determine all quest administration, interpretation and app Supervisors shall appoint three (3) or the pleasure of the Board.	The primary responsibility of the for the exclusive benefit of the subject to the specific terms of the r and discretion to construe the terms tions arising in connection with the lication of the Plan. The Board of
Mr. Jay Stegmaier will step down as a Trackard Cordle, Mary Lou Lyle and Cratrustees. The Board of Supervisors is Trustee, effective September 1, 2007 willingness to serve.	ig Bryant will continue to serve as requested to appoint Thierry Dupuis as
Preparer: Karla J. Gerner	Title: <u>Director, HRM</u>
Attachments: Yes No	# 000028



Meeting Date: August 22, 2007 Item Numb	oer: 8.B.
Subject: Streetlight Installation Cost Approvals	
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
This item requests Board approval of new streetlight instal and Midlothian Districts.	lations in the Dale
Summary of Information:	
Streetlight requests from individual citizens or civic growthe Department of Environmental Engineering. Staff request from Dominion Virginia Power for each request received. We are received, staff re-examines each request and presents available regular meeting of the Board of Supervisors Staff provides the Board with an evaluation of each regularing criteria:	sts cost quotations when the quotations s them at the next for consideration.
1. Streetlights should be located at intersections	;
CONTINUED NEXT PAGE	
Preparer: Richard M. McElfish Title: Director, Environmental	Engineering
Attachments:	# 000029

Summary of Information: (Continued)

- 2. There should be a minimum average of 600 vehicles per day (VPD) passing the requested location if it is an intersection, or 400 VPD if the requested location is not an intersection;
- 3. Petitions are required and should include 75% of residents within 200 feet of the requested location and if at an intersection, a majority of those residents immediately adjacent to the intersection.

Cost quotations from Dominion Virginia Power are valid for a period of 60 days. The Board, upon presentation of the cost quotation may approve, defer, or deny the expenditure of funds from available District Improvement Funds for the streetlight installation. If the expenditure is approved, staff authorizes Dominion Virginia Power to install the streetlight. A denial of a project will result in its cancellation and the District Improvement Fund will be charged the design cost shown; staff will notify the requestor of the denial. Projects cannot be deferred for more than 30 days due to quotation expiration. Quotation expiration has the same effect as a denial.

DALE DISTRICT:

• Not in a recorded subdivision, on Nash Road, in the vicinity of 10705 Cost to install streetlight: \$448.88

(Design Cost: \$110.92)

Does not meet minimum criterion for intersection

MIDLOTHIAN DISTRICT:

• In the Highland Hills subdivision: South intersection of Ben Nevis Drive and Robert Bruce Drive Cost to install streetlight: \$1,686.20

(Design Cost: \$221.84)
Meets minimum criteria

For information regarding available balances in the District Improvement Fund accounts, please reference the District Improvement Fund Report.

STREETLIGHT REQUEST Dale District

Request Received: March 19, 2007 Estimate Requested: March 19, 2007

Estimate Received: August 8, 2007 Days Estimate Outstanding: 142

NAME OF REQUESTOR: Mr. Jack Yeratt ADDRESS: 10701 Nash Road

Chesterfield, VA 23838

REQUESTED LOCATION:

Nash Road, on the existing pole in the vicinity of 10705 Nash Road Cost to install streetlight: \$448.88

POLICY CRITERIA:

Intersection: Not Qualified, location is not an intersection

Vehicles Per Day: Qualified

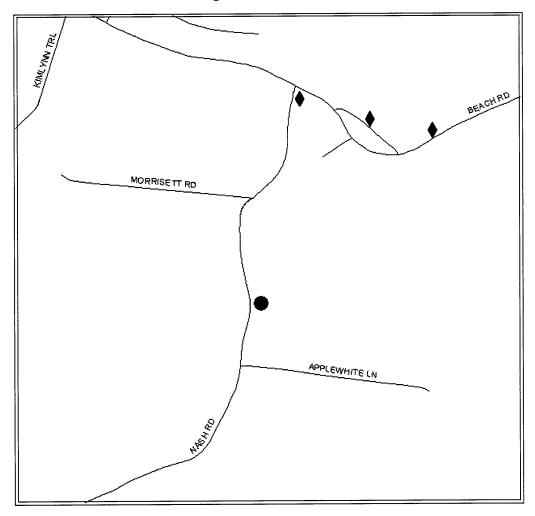
Petition: Qualified

Requestor Comments:

"The section of road just south of Morissett Road to Applewhite Lane has four private driveways intersecting with Nash Road that have little or no light and are considered unsafe property entrances from Nash Road. Entrances are unsafe any time of day, but especially during the absence of light. The current use of tape, etc., for markings are insufficient methods for drivers to discern property entrances. North bound vehicle lights does not make it easier and it is impossible to detect the presence of wildlife when entering property... example, recently when exiting Nash, unseen deer activity was encountered immediately (like a vehicle length off the road). It could have been ugly if the activity had been different. This activity could not be seen when exiting Nash. Also consider, it would be almost impossible for unfamiliar drivers to the area to find entrances to these properties with our hills and ravines."

Street Light Request Map

August 22, 2007



This map is a copyrighted product of the Chesterfield County GIS Office.

Street Light Legend

- existing light
- requested light



This map shows citizen requested streetlight installations in relation to existing streetlights.

Existing streetlight information was obtained from the Chesterfield County Environmental Engineering Department.



1,250 625 0 1,250 Feet



STREETLIGHT REQUEST Midlothian District

Request Received: January 17, 2007 Estimate Requested: January 17, 2007

Estimate Received: July 22, 2007 Days Estimate Outstanding: 181

NAME OF REQUESTOR: Ms. Christine Billings
ADDRESS: 8229 Robert Bruce Drive

Richmond, VA 23235

REQUESTED LOCATION:

In the Highland Hills subdivision, at the south intersection of Ben Nevis Drive and Robert Bruce Drive.

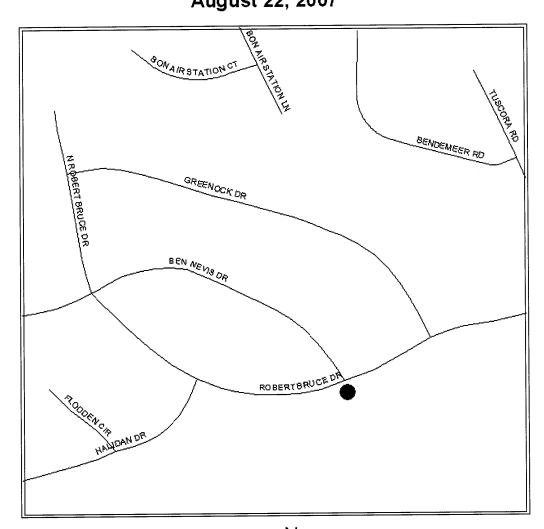
Cost to install streetlight: \$1,686.20

POLICY CRITERIA:

Intersection: Qualified Vehicles Per Day: Qualified Petition: Qualified

Requestor Comments: "Purpose is to prevent vandalism and prevent cars from driving off road into deep ditch - - both of which have occurred at this location."

Street Light Request Map August 22, 2007



This map is a copyrighted product of the Chesterfield County GIS Office.

Street Light Legend

- existing light
- requested light



This map shows citizen requested streetlight installations in relation to existing streetlights.

Existing streetlight information was obtained from the Chesterfield County Environmental Engineering Department.



41<u>0 205 0 41</u>0 Feet



Page 1 of 2

Item Number: 8.C.1.



Meeting Date: August 22, 2007

Subject:
Authorize the Receipt and Appropriation of Grant Funds in the Amount of \$84,000 from the Commonwealth of Virginia Department of Health, Office of Emergency Medical Services
County Administrator's Comments:
County Administrator:
Board Action Requested:
Authorize the Fire and EMS Department to receive and appropriate \$84,000 in grant funds from the Commonwealth of Virginia Department of Health, Office of Emergency Medical Services.
Summary of Information:
The Board of Supervisors is requested to approve the acceptance and appropriation of \$84,000 in grant funds from the Commonwealth of Virginia Department of Health, Office of Emergency Medical Services to help fund the purchase of eight Zoll defibrillators which are valuable, life saving equipment, which will further enhance the delivery of Emergency Medical Services to the citizens of our county.
The grant has a local match requirement of \$84,000, which will be funded from the FY08 Revenue Recovery operating budget.
Preparer: Paul W. Mauger Title: Fire Chief
Attachments: Yes No 000035





Meeting Date: August 22, 2007

Budget and Management Comments:

This item requests that the Board authorize the receipt and appropriation of a State grant in the amount of \$84,000 which will be matched with Revenue Recovery funds to purchase eight defibrillators (at a cost of \$21,000 each). Five additional defibrillators will be purchased during FY2008 with Revenue Recovery funding which will equip all the ambulances with the newest technology available.

Preparer: Allan M. Carmody Title: Director, Budget and Management



Meeting Date: August 22, 2007 Item Number	er: 8.C.2.a.
Subject: Resolution Recognizing Firefighter J. Kirk Seither, Chester Emergency Medical Services Department, Upon His Retirement	field Fire and
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
Adoption of resolution.	
Summary of Information:	
Staff is requesting the Board of Supervisors recognize Fire: Seither's retirement on August 1, 2007 after serving the dedicated service for 25 years.	
Preparer: Paul W. Mauger Title: Fire Chief	
Attachments: Yes No	# 000037

RECOGNIZING FIREFIGHTER J. KIRK SEITHER UPON HIS RETIREMENT

WHEREAS, Firefighter J. Kirk Seither retired from the Fire and Emergency Medical Services Department, Chesterfield County, on August 1, 2007; and

WHEREAS, Firefighter Seither attended Career Recruit School #12 in 1982 and has faithfully served the county for over twenty-five years in various assignments as a Firefighter at the Dutch Gap, Dale, Centralia, and Enon Fire and EMS Stations, and was also assigned to the Rivers Bend Fire and EMS Station; and

WHEREAS, Firefighter Seither served as a back-up flight medic with the initial crew of the Virginia State Police Med-Flight medical evacuation helicopter at the inception of that program in the Commonwealth of Virginia; and

WHEREAS, Firefighter Seither was involved in many successful fire and emergency medical incident scenes, including service as a member of the county's SCUBA Rescue team where he was part of a boat crew that on August 18, 1985 rescued a citizen stranded on the top of his automobile after it was swept off the roadway by the rapidly flowing flood waters of a rain-swollen Powhite Creek; and

WHEREAS, Firefighter Seither was recognized with a Life Save Award for the professional care he rendered to a patient suffering from an obstructed airway at the patient's home in the Greenleigh Trailer Park on March 18, 1995; and

WHEREAS, Firefighter Seither participated in the career development program and attained a position as a firefighter specialist in February 2001; and

WHEREAS, Firefighter Seither has continued for these many years of service to demonstrate performance meeting the highest expectations of Chesterfield County and the Fire and EMS Department.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors recognizes the contributions of Firefighter J. Kirk Seither, expresses the appreciation of all residents for his service to the county, and extends appreciation for his dedicated service and congratulations upon his retirement.

Meeting Date: August 22, 2	007 Item Number:	8.C.2.b.
Subject:		
	Firefighter Marvin James, Cheste s Department, Upon His Retirement	
County Administrator's Comme	ents:	
County Administrator:		
Board Action Requested:		
Adoption of resolution.		
Summary of Information:		
Services Department, up	arvin James, Chesterfield Fire and on his retirement on September vice to the citizens of Chesterfi	1, 2007, after
Preparer: Paul W. Mauger	Title:_Fire Chief	
Attachments: Yes	s No	# 000039

RECOGNIZING FIREFIGHTER MARVIN M. JAMES UPON HIS RETIREMENT

WHEREAS, Firefighter Marvin M. James will retire from the Fire and EMS Department, Chesterfield County, on September 1, 2007; and

WHEREAS, Firefighter James attended Recruit School #17 in 1986 and has faithfully served the county for over twenty-one years in various assignments as a firefighter at the Bon Air Fire and EMS Department; the Airport Fire and EMS station; and the Matoaca Fire and EMS Department; and

WHEREAS, Firefighter James was involved and recognized for the extrication of a victim who had fallen seventy-five feet inside of a smoke stack at the Dutch Gap Power Station in October 1994; and

WHEREAS, Firefighter James was recognized in September 2002 with an Emergency Medical Services award for his role in saving the life of a citizen suffering from cardiac arrest; and

WHEREAS, Firefighter James was involved and recognized for the successful extrication of a horse that was stuck in mud on a Matoaca Road farm in May 2004.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors recognizes the contributions of Firefighter James, expresses the appreciation of all residents for his service to the County, and extends appreciation for his dedicated service and congratulations upon his retirement.



Meeting Date:	August 22, 2007		Item Number: 8.	C.2.c.
Subject:				
Resolution Reco	ognizing Mr. Willi	iam F. Moss,	Utilities Depart	ment, Upon His
County Administra	tor's Comments:			
County Administra	tor:			
Board Action Requ	ested:			
Staff requests	the Board adopt t	the attached	resolution.	
Summary of Info	ormation:			
Staff requests William F. Moss Department.	the Board adopt for 31 years of	the attach service to th	ed resolution r e Chesterfield C	ecognizing Mr. ounty Utilities
District:				
Preparer: Roy E	Covington	Title <u>:</u>	Director of Utilities	 .
Attachments:	Yes	No		# 000041 ;

RECOGNIZING MR. WILLIAM F. MOSS UPON HIS RETIREMENT

WHEREAS, Mr. William F. Moss has served the County of Chesterfield as a faithful employee of the Utilities Department since his original hiring on October 13, 1976; and

WHEREAS, the expertise developed by Mr. Moss during his tenure as a waterworks operator at the Falling Creek and then Addison/Evans Water Plants has enabled him to make significant contributions to the operation of these two facilities; and

WHEREAS, Mr. Moss has willingly shared his accumulated knowledge and expertise with his younger, developing colleagues to aid them in their growth and development; and

WHEREAS, Mr. Moss has always presented the citizens of Chesterfield County with the highest level of customer service and a patient and genteel demeanor that reflected positively on a competent and caring Chesterfield County workforce; and

WHEREAS, the gentlemanly temperament and true concern for his coworkers demonstrated by Mr. Moss during his years of employment with the Utilities Department have resulted in his being a well-liked and valued colleague.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors recognizes Mr. William F. Moss for his outstanding contributions, expresses the appreciation of all residents for his service to the county, and extends appreciation for his dedicated service, congratulations upon his retirement, and best wishes for a long and happy retirement.

Meeting Date: August 22, 2007	ltem Number: 8.	C.2.d.
Subject: Resolution Recognizing September County	r 24, 2007, as "Family Day"	in Chesterfield
County Administrator's Comments:		
County Administrator:		_
Board Action Requested:		
The Board of Supervisors is requ	uested to adopt the resolutio	n.
Summary of Information:		
Chesterfield County will join a recognizing September 24, 2007 a Children." Family Day was est. Substance Abuse at Columbia Unfindings that show children in fare much less likely to use toba governors and local officials ac Family Day. Youth Planning and I of Family Day in Chesterfield Co	s "Family Day - A Day to Eat I ablished by the Center for iversity. It focuses attents families that frequently eat acco, alcohol or other drugs. cross the country are encourag Development and SAFE are prom	Dinner With Your Addiction and ion on research dinner together President Bush, ged to recognize
Preparer: <u>Jana D. Carter</u>	Title: <u>Director, Juvenile Services</u>	
Attachments: Yes	No	# 000043

RECOGNIZING SEPTEMBER 24, 2007, AS "FAMILY DAY - A DAY TO EAT DINNER WITH YOUR CHILDREN"

WHEREAS, the observance of "Family Day - A Day to Eat Dinner with Your Children" provides a unique opportunity for families in Chesterfield County to join one another at the dinner table as a means of strengthening family relationships; and

WHEREAS, parental influence is known to be one of the most crucial factors in determining the likelihood of substance abuse by teenagers; and

WHEREAS, surveys conducted by the National Center on Addiction and Substance Abuse have consistently found that children and teenagers who routinely eat dinner with their families are far less likely to use cigarettes, alcohol and illegal drugs; and

WHEREAS, meal times offer opportunities for families to spend time together, providing a basic structure that strengthens and encourages lasting relationships; and

WHEREAS, young people from families who almost never eat dinner together compared to those that do are 72 percent more likely to use cigarettes, alcohol and illegal drugs; and

WHEREAS, the correlation between family dinners and reduced risk for teen substance abuse is well documented; and

WHEREAS, Chesterfield County Youth Planning and Development and SAFE, Chesterfield's substance abuse prevention coalition, are promoting the importance of family dinners to parents in Chesterfield County, Virginia; and

WHEREAS, the Chesterfield County Board of Supervisors recognizes that eating dinner as a family is an important step toward raising drug-free children.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors recognizes Monday, September 24, 2007, as "Family Day - A Day to Eat Dinner With Your Children," to recognize the positive impact of strong family interaction on the well being and future success of the young people in Chesterfield County.



Meeting Date: August 22, 2007	Item Number: 8.C.2.e.
Subject:	
Recognizing Mr. Joshua Phillip Logan Upon Attaining Rank of Eagle Scout	Williamson and Mr. Max William Hrank
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
Adoption of attached resolution.	
Summary of Information:	
Staff has received a request for the Bo Mr. Joshua Phillip Logan Williamson, United Methodist Church, and Mr. Max W Bethel Baptist Church, upon attaining	Troop 879, sponsored by Saint Mark's Tilliam Hrank, Troop 800, sponsored by
Preparer: Lisa Elko	Title: Clerk to the Board
Attachments: Yes No	# 0900 45

WHEREAS, the Boy Scouts of America was incorporated by Mr. William D. Boyce on February 8, 1910, and was chartered by Congress in 1916; and

WHEREAS, the Boy Scouts of America was founded to build character, provide citizenship training and promote physical fitness; and

WHEREAS, after earning at least twenty-one merit badges in a wide variety of skills including leadership, service and outdoor life, serving in a leadership position in a troop, carrying out a service project beneficial to their community, being active in the troop, demonstrating Scout spirit, and living up to the Scout Oath and Law

Mr. Joshua Phillip Logan Williamson, Troop 879, sponsored by Saint Mark's United Methodist Church and Mr. Max William Hrank, Troop 800, sponsored by Bethel Baptist Church have accomplished those high standards of commitment and have reached the long-sought goal of Eagle Scout which is received by only four percent of those individuals entering the Scouting movement; and

WHEREAS, growing through their experiences in Scouting, learning the lessons of responsible citizenship, and endeavoring to prepare themselves for roles as leaders in society, Joshua and Max have distinguished themselves as members of a new generation of prepared young citizens of whom we can all be very proud.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors hereby extends its congratulations to Mr. Joshua Phillip Logan Williamson, Troop 879, sponsored by Saint Mark's United Methodist Church and Mr. Max William Hrank, and acknowledges the good fortune of the county to have such outstanding young men as its citizens.



Meeting Date:	August 22, 2007		Item Number: 8.	C.2.f.
Subject: Resolution Re His Retiremen	cognizing Major Wa t	arner W. Willi	.ams, Police Depa	rtment, Upon
County Administ	trator's Comments:			
County Administ	trator:			_
Board Action Re	quested:			
The adoption	of the attached re	esolution.		
Summary of In	nformation:			
Major Warner provided over	W. Williams reti	red from the ice to the cit	Police Departmentizens of Chester	nt after having field County.
Preparer: Col	onel Thierry G. Dupuis		Title: Chief of P	<u>olice</u>
Attachments	Yes	No		# 600047

RECOGNIZING MAJOR WARNER M. WILLIAMS UPON HIS RETIREMENT

WHEREAS, Major Warner W. Williams retired from the Chesterfield County Police Department on July 1, 2007, after providing 27 years of quality service to the citizens of Chesterfield County; and

WHEREAS, Major Williams has faithfully served the county in the capacity of Patrol Officer, Sergeant, Lieutenant, Captain, and Major; and

WHEREAS, Major Williams was selected as Rookie of the Year for the year of 1980; and

WHEREAS, Major Williams has also served the Police Department as a member of the Tactical Team, PERT Coordinator and SWAT Team Commander; and

WHEREAS, Major Williams was a graduate of the first Police Executive Leadership School and is also a graduate of the FBI National Academy and Chesterfield County's Total Quality Improvement Program; and

WHEREAS, Major Williams has served as Division Commander for four divisions of the Police Department, and has served as Major of all three sworn Bureaus; and

WHEREAS, Major Williams has received numerous letters of thanks and appreciation for service rendered from the citizens of Chesterfield County; and

WHEREAS, Major Williams has provided the Chesterfield County Police Department with many years of loyal and dedicated service; and

WHEREAS, Chesterfield County and the Board of Supervisors will miss Major Williams' diligent service.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors recognizes Major Warner W. Williams, and extends on behalf of its members and the citizens of Chesterfield County, appreciation for his service to the county, congratulations upon his retirement, and best wishes for a long and happy retirement.

Meeting Date:	August 22, 2007	Item Num	ber: 8.C.2.g.
Outlibrate			
<u>Subject:</u>			
		ter Kevin Goins, C ment, Upon His Retire	hesterfield Fire and ement
County Administr	rator's Comments:		
County Administr	rator:		
Board Action Red	uested:		
Adoption of at	tached resolution.		
Summary of In	formation:		
Chesterfield	Fire and Emergenc	y Medical Services	efighter Kevin Goins, Department, upon his dicated service to the
Preparer: Paul	W. Mauger	Title: Deputy Fire	Chief
Attachments:	Yes	No	000049

RECOGNIZING FIREFIGHTER KEVIN R. GOINS UPON HIS RETIREMENT

WHEREAS, Firefighter Kevin R. Goins retired from the Fire and EMS Department, Chesterfield County, on May 1, 2007; and

WHEREAS, Firefighter Goins was hired as a dispatcher in the Emergency Communications Center known as "Fire Alarm Headquarters" in 1977; and

WHEREAS, Firefighter Goins transferred to the maintenance and logistics section of the fire department in 1978; and

WHEREAS, Firefighter Goins attended Recruit School #9 in 1978 and has faithfully served the county for nearly thirty years in various assignments as a firefighter at the Manchester, Chester, Buford, Midlothian and Beach Fire and EMS Stations; as a firefighter at the Manchester, Chester, Buford, Midlothian and Beach Fire and EMS Stations; and

WHEREAS, Firefighter Goins was recognized as a third generation member of the Chesterfield Fire Department at emergency scenes, including a key tactical position at the Smith fire that prevented the fire from spreading to other parts of the building.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors recognizes the contributions of Firefighter Kevin R. Goins, expresses the appreciation of all residents for his service to the county, and extends appreciation for his dedicated service and congratulations upon his retirement.



Subject:

Meeting Date: August 22, 2007

CHESTERFIELD COUNTY BOARD OF SUPERVISORS AGENDA

Page 1 of 2

Item Number: 8.C.3.

Authorize the County Administrator to Renew a Health Care Contract with Anthem Blue Cross and Blue Shield and a Dental Care Contract with Delta Dental Plan of Virginia for 2008	
County Administrator's Comments: County Administrator:	
Board Action Requested: The Board of Supervisors is requested to authorize the County Administrato to renew the county's contract with Anthem Blue Cross and Blue Shiel (Anthem) and its contract with Delta Dental Plan of Virginia (Delta Dental for 2008 at the rates attached.	d
Summary of Information: With the technical assistance of Wachovia Employer Solutions, a national benefits consulting firm, county and schools staff recently completed the rate renewal process for the 2008 employee health and dental programs. If order to continue to provide employees with quality health and dental care options, it is recommended that the county renew its current contracts with Anthem and Delta Dental. Under the proposed 2008 program, employees will have the choice of three different Anthem health plans (two HMOs and a PPC and two dental plans (basic and comprehensive). Health care rates will increase 5.5%, and dental rates will increase 7.0% in 2008.	e n e h
Members of the joint Board of Supervisors and School Board Benefits Committed were briefed on these issues and recommend approval to the full boards. The School Board will approve a similar agenda item on August 28, 2007.	
Preparer: Karla J. Gerner Title: Director, Human Resource Management Attachments: Yes No # 000051	ı



Page 2 of 2



Meeting Date: August 22, 2007

Budget and Management Comments:

This item requests that the Board authorize the County Administrator to renew the health care contract with Anthem Blue Cross and Blue Shield and renew the dental care contract with Delta Dental Plan of Virginia for calendar year 2008. The proposed rates in the attached schedule represent an increase in calendar year 2008 health care costs of 5.5% and an increase in dental care costs of 7.0%.

The proposed health care rate increase of 5.5% is less than what was projected during the FY2008 budget process. Actual expenditure savings and corresponding recommendations will be evaluated with the annual year end process.

Preparer: Allan M. Carmody Title: Director, Budget and Management

CY08 Monthly Health/Dental Rates

	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007
	Healthkeepers	Healthkeepers	Healthkeepers	Healthkeepers		Keycare	Delta Dental	Delta Dental	Delta Dental	Delta Dental
The state of the s	Basic HMO	Basic HMO	Standard HMO	Standard HMO	Keycare PPO	PPO	Basic	Basic	Comprehensive	Comprehensive
EMPLOYEE ONLY	\$344.10	326.04	\$380.70	360.72	\$448.22	424.70	19.18	16.76	38.08	36.78
COUNTY	324.00	311.00	335.00	320.00	335.00	320.00	17.00	14.76	17.00	14.76
EMPLOYEE	20.10	15.04	45.70	40.72	113.22	104.70	2.18	2.00	21.08	22.02
EMPLOYEE + CHILD	\$550.56	521.68	\$609.06	577.10	\$717.10	679.48	26.92	23.52	53.32	51.52
COUNTY	405.00	384.00	405.00	384.00	405.00	384.00	17.00	14.76	17.00	14.76
EMPLOYEE	145.56	137.68	204.06	193.10	312.10	295.48	9.92	8.76	36.32	36.76
EMPLOYEE + CHILDREN	\$671.02	635.82	\$742.30	703.36	\$873.98	828.12	26.92	23.52	53.32	51.52
COUNTY	405.00	384.00	405.00	384.00	405.00	384.00	17.00	14.76	17.00	14.76
EMPLOYEE	266.02	251.82	337.30	319.36	468.98	444.12	9.92	8.76	36.32	36.76
EMPLOYEE + SPOUSE	\$671.02	635.82	\$742.30	703.36	\$873.98	828.12	40.28	35.18	79.98	77.28
COUNTY	405.00	384.00	405.00	384.00	405.00	384.00	17.00	14.76	17.00	14.76
EMPLOYEE	266.02	251.82	337.30	319.36	468.98	444.12	23.28	20.42	62.98	62.52
FAMILY	\$1,015.12	961.86	\$1,122.94	1064.02	\$1,322.16	1252.80	53.78	46.98	106.66	103.04
COUNTY	618.00	585.00	618.00	585.00	618.00	585.00	17.00	14.76	17.00	14.76
EMPLOYEE	397.12	376.86	504.94	479.02	704.16	08.799	36.78	32.22	89.66	88.28



Meeting Date:	August 22, 2007	Item Number: 8	.C.4.a.
Subject:			
-		Festival Permit for the Che For October 20 and 21, 2007	sterfield County
County Administr	rator's Comments:		
County Administr	rator:		
	Supervisors is	requested to grant an entertanty Airport Festival Airshow fo	
Summary of Inf	formation:		
("Airshow") at 7511 Airfield Uppy's Conveni Channel Radio, Airshow will on next couple of	the Chesterfiel Drive, Richmond, ence Stores, Inc Delta Airport Co continue to pursu months. All ne	rt proposes to conduct a Fest de County Airport on October 20, VA 23237. The Airshow will also shamin Hotels, Enterprise Fonsultants and Dominion Aviatione additional sponsors over the proceeds will be donated to endors to sell Airshow related	and 21, 2007 at be sponsored by Rental Car, Clear on Services. The he course of the the United Way.
Preparer:	Steven L. Micas	Title: County Attorney 0505:75912.1	
Attachments:	Yes	No	# 000054

Page 2 of 2

The show will begin at 9:00 a.m. and end at 4:00 p.m. each day. General Admission tickets will be sold in advance for \$10.00 per adult and \$15 at the gate with children under 12 admitted free. The promoters estimate that ten to twenty thousand visitors per day will attend. There will be no parking on site for the general public. Parking will be available at the County Courts Complex, The County Administration Complex, L.C. Bird High School, O.B. Gates Elementary School, and the Chesterfield Tech Center. School Board Transportation will provide shuttle bus service from those parking areas to the Airport.

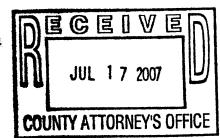
The Airshow will consist of aerobatic teams, parachute teams, military flybys, a jet-powered ambulance, World War II military aircraft, a wing walking act and many more exciting performers. Also scheduled are a NASA education display, the Denny Hamlin Fed Ex show-car, and other ground displays. There will be a classic Mustang car show administered by the Richmond Mustang Car Clubs. Activities for children in the "kids zone" include a rock climbing wall, a space simulator, and a parachute packing lesson. A Federal Aviation Administration representative will be on site to assist. All Airshow acts have submitted proof of their insurance.

The Airport's application and the plan for the event, a copy of which is attached, meet the requirements of the <u>County Code</u> regulating entertainment festival permits. In addition to the County Attorney's review, Charles Dane, Director of Aviation Services has met with public safety, Health, and Risk Management staff in order to ensure a safe and successful Airshow. Airshow plans developed with staff assistance include measures to ensure public safety, fire prevention, medical protection, sanitation, traffic control, insurance coverage and security. If the permit is granted, staff will monitor compliance with all conditions imposed during the two show days.

0505:75912.1



Chesterfield County, Virginia



Memorandum

DATE:

July 12, 2007

TO:

STELL PARTHEMOS

FROM:

CHARLES E. DANE, AIRPORT MANAGER

SUBJECT:

REQUEST FOR FESTIVAL PERMIT

We would like to request your assistance with obtaining a festival permit for the Chesterfield County Regional Air Show that we are planning. Chesterfield County Airport is the applicant as well as the event promoter.

The Festival/Airshow will be in part sponsored by Uppy's Convenience Stores, Shamin Hotels, Enterprise Rental Car, Clear Channel Radio, Delta Airport Conultants and Dominion Aviation Services. We will continue to pursue additional sponsors over the course of the next couple of months. Tickets will cost \$10 in advance and \$15 at the gate with children under 12 admitted free. All net proceeds will be donated to United Way.

The event will be held Saturday, October 20th, and Sunday, October 21, 2007, at 7511 Airfield Drive, Richmond, VA 23237. The show will begin at 9:00 a.m. and end at 4:00 p.m. each day.

There will be no parking on site for the general public. However, parking will be available at the County Courts Complex, The County Administration Complex, L.C. Byrd High School, O.B. Gates Elementary School, and the Chesterfield Technical Center. School Board Transportation will provide shuttle busses from those parking areas to the airport. We anticipate ten to twenty thousand visitors each day.

Security and crowd control will be provided by the Chesterfield County Police Department. Also available will be the Virginia State Police and Civil Air Patrol, both located at the airport. Chesterfield Fire and EMS Station 15 and the State Police Medical Evacuation Helicopter are both located on site and will be available immediately for medical emergencies throughout the event.

We are working with vendors who will sell Air Show related memorabilia, as well as a variety of food.

Entertainment will consist of aerobatic teams to include three time world champion Patty Wagstaff, the Army Golden Knights parachute teams, military fly-bys, a jet powered ambulance, WWII military aircraft, a wing walking act, and many more exciting performers. Also scheduled is A NASA education display, the Denny Hamlin Fed Ex show-car, and other ground displays. We will also have a classic mustang car show that will be administered by the Richmond Mustang Car Clubs. There will be activities for children in the "kids zone" to include a rock climbing wall, a space simulator, and a parachute packing lesson.

An air boss has been contracted to direct the Airshow acts and the airspace waiver request has been submitted to and approved by the FAA. Margaret Morrison from the FAA will be on site to assist. Airshow acts have submitted proof of their insurance.

We will send a county all e-mail to solicit volunteers and we expect up to 200 volunteers, if the past two shows are any indication. We will also have volunteers from the Civil Air Patrol and the members of the Young Eagles Club.

We are working closely with the Chesterfield County Fire and Police Departments, Public Affairs, School Board Transportation, Risk Management, Parks and Recreation, General Services Radio Shop and Print Shop, Virginia Department of Transportation and Dominion Aviation Services and others to plan this event. Our intent is to provide a wonderful experience to the citizens of Chesterfield County and the Richmond Region.



CHESTERFIELD COUNTY BOARD OF SUPERVISORS Page 1 of 2 **AGENDA**

Meeting Date: August 22, 2007	Item Number:	8.C.4.b.
Subject: Request for a Music/Entertainment on Saturdays and Sundays between		•
County Administrator's Comments:		
County Administrator:		
Board Action Requested:		
The Board of Supervisors i music/entertainment festival pe and Sundays between September 2	-	_
Summary of Information:		
Chesterfield Berry Farm propose season on the lawns of the Ches Pear Orchard Road, Moseley, Vin and Sundays from September 22, will be held on October 13 and Berry Farm opens at 9:00 a.m. Mp.m., with all other activities	terfield Berry Farm which is rginia. The music will be h through October 31, 2007. A 14, 2007 which will also in usic will begin at 11:00 a.m.	located at 26002 eld on Saturdays Pumpkin Festival clude music. The
Preparer: <u>Steven L. Micas</u>	Title: County Attorney 0505:76209.1	
Attachments: Yes	No	# 000058

Page 2 of 2

Chesterfield Berry Farm is both the applicant and event promoter. The Berry Farm is currently seeking corporate sponsors to help offset the major costs of the event.

All net proceeds from the music series will go to the Berry Farm.

Chesterfield Berry Farm will assume full financial responsibility for the Festival and music series. Nick's Karaoke will be playing music on all weekends except for the October 13 and 14 Pumpkin Festival, which will feature a live band. The band has not yet been hired. No separate admission fee will be charged for the music or pumpkin festival. It is anticipated that approximately 3,000 people will attend the event during the Festival hours.

Chesterfield Berry Farm has facilities where food, water, and soft drinks will be available for purchase during hours of operation. Portolets remain on the location throughout the season and are serviced twice a week by Nes services. Chesterfield Berry Farm has clean-up and trash disposal. There is ample parking, and off-duty police officers will assist with parking, crowd control and other security needs. Emergency medical and fire department officials have been made aware of the event and are available to render service if needed.

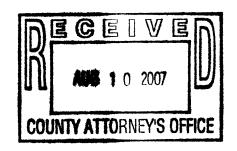
The music/entertainment arrangements have been reviewed by the County Attorney's Office and meet the substantive requirements of the ordinance. These arrangements provide adequate measures to insure public safety, fire prevention, medical protection, sanitation, traffic control, insurance coverage, relevant permits and security. The Berry Farm has sponsored similar festivals in the spring and fall of the past three years. All of these events have been safely conducted in accordance with County requirements.

Although the Board of Supervisors may require a bond to insure compliance with the permit, the Board traditionally has not required a bond except when the event occurs on County property. Staff recommends that the Board not require a bond.

0505:76209.1

August 6, 2007

Stylian P. Parthemos Chesterfield County Administration Building, Room 503 P.O. Box 40 Chesterfield, Va 23832-0040



Dear Mr. Parthemos,

Thank you for your time in regarding our application for a music and festival permit.

Chesterfield Berry Farm, located at 20501 Skinquarter Rd., Moseley, Virginia, is both the applicant and event promoter. We will receive all net proceeds from our music and our Festival series except for our St. Judes Weekend in which some of the proceeds will go to the charity.

We plan to have family oriented outdoor music during our pumpkin season on the lawns of Chesterfield Berry Farm which is located at 26002 Pear Orchard Rd. Moseley, Virginia. The music will be held on Saturdays and Sundays from September 22, 2007 thru October 31, 2007. We also plan to have a Pumpkin Festival on October 13 and 14, 2007. The Pumpkin Festival and music series is to help promote our pick your own pumpkins.

Chesterfield Berry Farm opens at 9:00am with music beginning at 11:00am. Music will end at 4:00pm and all other activities will end at 6:00pm.

Chesterfield Berry Farm is assuming full financial responsibility for the Festival and music series. We are currently seeking corporate sponsors to help offset some of our major costs.

We are currently in the process of acquiring a band for our Pumpkin Festival Weekend. Nick's Karaoke will be playing music all other Festivals.

We will not be charging admission for music on Saturdays and Sundays. We anticipate having 3000 people on the farm during the Festival hours.

We have existing portolets at Chesterfield Berry Farm and they will remain there throughout our Pumpkin season. They are serviced twice a week by Nes services.

Chesterfield Berry Farm currently has clean-up and trash disposal. We have dumpsters located on the farm and Tranium picks up the trash twice a week.

Lodging will not be a necessity for our Festivals.

Chesterfield Berry Farm has facilities where food, water, and soft drinks will be available for purchase during hours of operation.

We are alerting the Manchester Rescue Squad and Clover Hill Fire department of our event's dates and times. We will work with our security officers in the event of an emergency to notify the proper emergency medical personnel.

Adequate parking will be available in the Chesterfield Berry Farm parking lot with any overflow parking in our fields next to parking area.

Outdoor lighting will not be used during our events as our events occur during day hours.

Music both live and taped will be played in such a manner that the sound will not be a nuisance to adjacent property owners. Heavy evergreen buffers are already in place between Chesterfield Berry Farm property and adjacent property owners. All sound issues are under direct control of Shannon Mangnuson (General Retail Manager) with Chesterfield Berry Farm.

We have an agreement in place with the Chesterfield County Police Department to employ off-duty police officers who will assist our staff with parking, crowd control and all other security components of our Festival and music series.

Chesterfield Berry Farm carries a general \$2 million liability insurance policy to insure against injury or damage.

Statements authorizing Chesterfield County principals to enter the property during our music series or Festival are attached herewith.

Our application fee is attached.

I trust that the above information is adequate to meet the county's requirements for approval of our Entertainment Festival permit. Please call with any questions or concerns.

Sincerely,

Thank you for your assistance.

Shannon Mangnuson General Retail Manager

August 6, 2007

Chesterfield Berry Farm authorizes Chesterfield County principals to enter the property before or during our season.

Aaron Goode
President

Betty B. Soode

Betty B. Goode Property owner

Meeting Date: A	August 22, 2007	7	Item Number: 8	.C.5.
Subject:				
		the Motorola, Inc lations from Vario		ract Purchase
County Administrate	or's Comments	į		
County Administrate	or:			
Board Action Reque	ested:			
Motorola contrac	ct purchase o	tor to approve Ch rder (#685506) by ent year operating	\$175,802 and to	ransfer \$160,092
Summary of Infor	mation:			
additional CAD licenses and ass and Police. The obtain favorable	workstation sociated moun e increase i e pricing al	purchase order is client licenses, ting hardware for in the purchase o ready established ions and activiti	mobile compute Emergency Commu rder will allow as a result o	er applications unications, Fire the county to of the original
Preparer: Stephe	<u>en E. Davis</u>	Title:	DCS Project Manag	<u>ger</u>
Attachments:	Yes	No		00063



Page 2 of 2



Meeting Date: August 22, 2007

Budget and Management Comments:

This item requests the Board to approve a change order for Motorola, Inc. in the amount of \$175,802 for additions to the CADs system in the Police, ECC and Fire Departments. In addition, the item requests the transfer of funds to the project to cover the additional costs.

The execution of this change order is a result of planned increases in staffing and funding that has been made a part of the FY2008 budget. change order also allows the county to obtain favorable contract prices from Motorola. There are sufficient appropriations in the FY2008 budget of the departments affected as well as in the CADs capital project to fund the improvements.

Dranavari	Allan Carmady	Title	Director	Rudget and	l Management
Preparer:	Allan Carmody	I ITIE:	Director.	Budget and	i Manadement



Meeting Date:	<u> August 22, 2007</u>				tem Numbe	r: 8.C.6.	
Subject:							
Independent Eva Proposal	aluation of	County	Practices	and	Procedures	Request fo	or
County Administrat	tor's Comments:	<u>:</u>					
County Administrat	tor:						
Board Action Requ	ested:						
Approval to pro	ceed with an	indepen	dent evalua	ition	request for	r proposal.	
Summary of Info	<u>rmation:</u>						
The Board of Sup Request for Prop practices and identify opport efficient in sp timeline for con leadership, and review in 2008. outcomes is atta	posal (RFP) for procedures, and pending taxpo ompleting such in time to be a description	or an in contract make re ayers' ch an a e availa	ndependent e ting proced ecommendati money. St analysis co able as soc	evaluadures ons taff oncurr on as	tion of cou and proce to make th was asked ent with feasible fo	inty managements and the county mone to prepare the change in the Board'	nt to re a in
Preparer: Lou Lass	siter		Title	e: <u>Int</u>	ernal Audit Dir	ector	
Attachments:	Yes		No			000065	

TIMELINE

- August 22, 2007 BOS approval with ability to proceed with RFP
- September 7, 2007 RFP on street
- October 10, 2007 Responses to RFP due
- November 14, 2007 Contract Award
- November 15, 2007 February 15, 2008 Field Work
- February 28, 2008 Final Report Due

KEY OBJECTIVE

Perform an evaluation of county's management practices and procedures, contracting procedures and processes, and identify opportunities and make recommendations to make the county more efficient in spending taxpayer's money.

SCOPE OF WORK

- 1. County Management practices and procedures Compile information, present conclusions and make recommendations for improvement as needed for the following areas:
 - Conduct general review of major organization wide county management practices and procedures to identify gaps and opportunities for improvement.
 - Use State APA FY06 Comparative cost information to benchmark the costs of services provided by Chesterfield on a per capita/student basis to other Virginia Local Governments with populations over 100,000. Identify service areas that are higher cost than the average that provide opportunity for cost savings.
- <u>2. Contracting practices and procedures</u> Compile information, present conclusions and make recommendations for improvement as needed for the following areas:
 - Review current contractual procurement, policies and procedures of the County and School System for compliance with Virginia Procurement Act. Determine if current procurement practices are designed to achieve the best value in spending taxpayer money while maintaining compliance, efficiency and effectiveness in the procurement process.
 - Identify innovative approaches to public procurement that are permitted in Virginia that are not being used by Chesterfield County/Chesterfield County Public Schools.
- <u>3. Cost saving and efficiency</u> Compile information, present conclusions and make recommendations for improvement as needed for the following areas:
 - Identify further efficiency opportunities for the County which have been implemented by other local governments and proven to save taxpayer resources while maintaining a high level of service. Specific opportunities presented should have documented costs projections verifying how they can be performed at a lower cost than currently provided by the County.

Expected Outcomes

- List of improvements or gaps in major organization wide practices and procedures.
- Independent assessment of the cost of services compared to other Virginia Local Governments of similar size and a list of areas where cost savings may be needed.
- Confirmation that contractual procurement policies, procedures and practices are in compliance with the Code of Virginia.
- Identification of procurement practices that could save taxpayer resources or be innovative in their approach.
- List of other opportunities that could be implemented to save taxpayer resources.



Meeting	Date:	August 22, 2007	Item Number: 8.0	C.7.
Subject:	State	Road Acceptar	nce	
County Adn	ninistra	tor's Comments:		
County Adn				
Summary	<u>of Info</u>	<u>rmation:</u>		
Bermuda:		Walthall	Ridge	
Matoaca:		Fox Club	Parkway and Village Square Parkw	ay
Preparer: <u>Ri</u>	ichard M	l. McElfish	Title: <u>Director, Environmental Engir</u>	neering
Attachm	ents:	Yes	No	# 000068

TO: Board of Supervisors

FROM: Department of Environmental Engineering

SUBJECT: State Road Acceptance - WALTHALL RIDGE

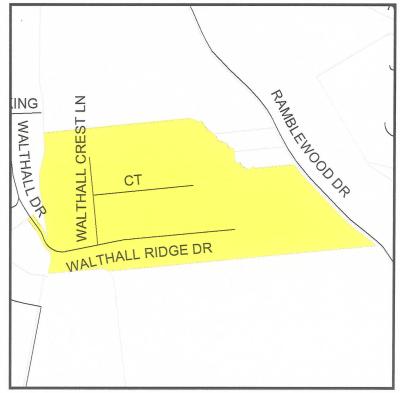
DISTRICT: BERMUDA

MEETING DATE: August 22, 2007

ROADS FOR CONSIDERATION:

WALTHALL CREST CT
WALTHALL CREST LN
WALTHALL DR
WALTHALL RIDGE DR

Vicinity Map: WALTHALL RIDGE



Produced By Chesterfield County GIS

TO: Board of Supervisors

FROM: Department of Environmental Engineering

SUBJECT: State Road Acceptance - Fox Club Pkwy and Village Square Pkwy

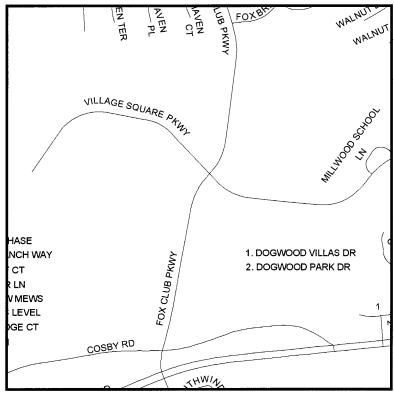
DISTRICT: MATOACA

MEETING DATE: August 22, 2007

ROADS FOR CONSIDERATION:

FOX CLUB PKWY AND VILLAGE SQUARE PKWY

Vicinity Map: Fox Club Pkwy and Village Square Pkwy



Meeting Date:	August 22, 2007	Item	Number: 8.C.8.a.	
Subject:				
	truction Contract for er Line Replacement	County Project	# 05-0301, Bellea	u Drive
County Administ	rator's Comments:			
County Administ	rator:			_
Board Action Reconstruction of \$260,507.3 necessary documents	contract to Southern 33 and authorize th	Construction Ut:	s is requested to a ilities, Inc. in th nistrator to exec	e amount
Summary of In approximately associated app	formation: This p 2,925 feet of 8-inc purtenances.	roject consis h and 555 feet	ts of construct of 6-inch water l	ion of ines and
Southern Const of \$260,507.3	ed eight (8) bids r truction Utilities, I 3. The County's en as evaluated the bid r.	nc. submitted th gineering const	he lowest bid in th ultant, R. Stuart	e amount Royer &
Funds are ava:	ilable in the current	CIP.		
<u>District:</u> Midlot	hian			
Preparer:	George B. Hayes P.E.	Title:	Assistant Director of U	tilities
Attachments:	Yes	No	# 00	0071



Page 2 of 2

Meeting Date: August 22, 2007

Budget and Management Comments:

This item requests that the Board award a construction contract to Southern Construction Utilities, Inc. in the amount of \$260,507.33 and authorize the County Administrator to execute the necessary documents. Sufficient funds are available in the Belleau Drive project budget to cover the cost of the construction contract.

Preparer: Allan M. Carmody Title: Director, Budget and Management



Meeting Date: August	22, 2007	Item Number:	8.C.8.b.
Subject:			
		nnty Project Number 04 er and Sewer District	
County Administrator's Co	omments:		
County Administrator:)		
construction contract Water and Sewer Dist	for the Ironwoodrict to R. M. C	mends Board of Su od Road Special Tax a . Contractors, Inc. : .nistrator to execut	nd/or Assessment in the amount of
Summary of Information	on:		
340 L.F. of 6" sewer service to properties	r line for laters s along Ironwood P	ater line, 1,240 L.F. als and will provide Road. The bids have k est bidder R. M. C. Co	water and sewer been reviewed and
Preparer: <u>William O. Wri</u>	g <u>ht</u> Tit	e: Assistant Director of	<u>Utilities</u>
Attachments:	Yes No	0	# 000073



CHESTERFIELD COUNTY BOARD OF SUPERVISORS Page 2 of 2 **AGENDA**

Meeting Date: August 22, 2007

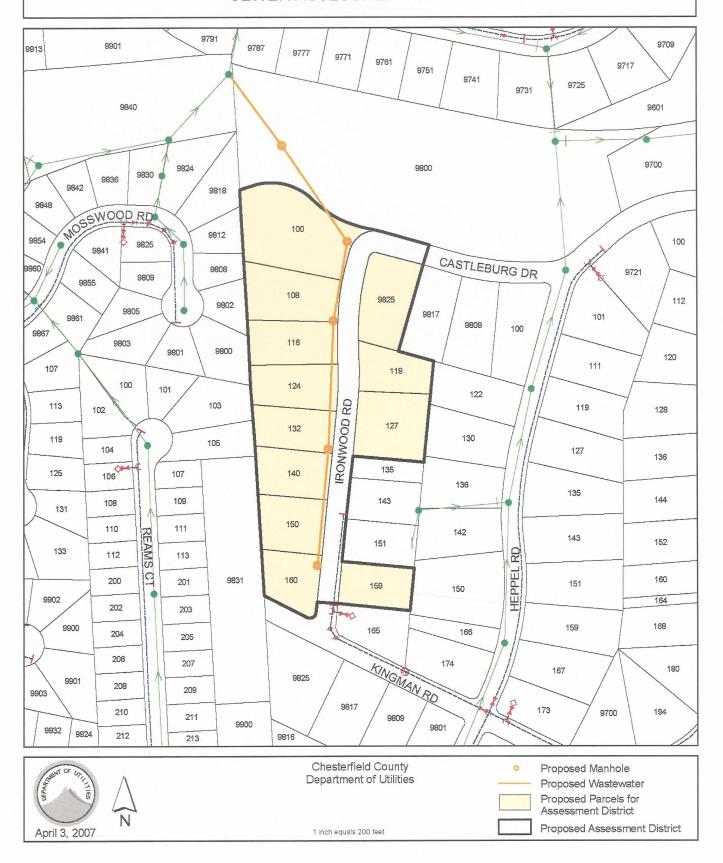
Budget and Management Comments:

This item requests that the Board award a construction contract to R.M.C. Contractors, Inc. in the amount of \$117,516 and authorize the County Administrator to execute the necessary documents. Sufficient funds are available in the Ironwood Road water and sewer assessment districts budgets to cover the cost of the construction contract.

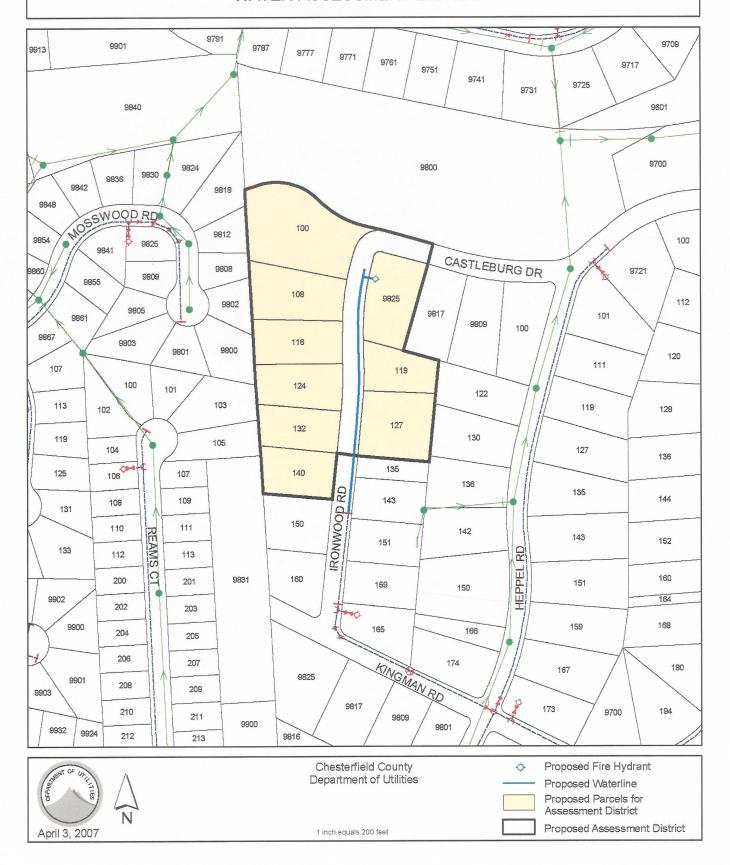
Preparer: Allan M. Carmody Title: Director, Budget and Management

CHESTERFIE	CHESTERFIELD COUNTY TABULATION SHEET	SHEET		
Project Name: IRONWOOD ROAD WATER AND SEWER ASSESSMENT DISTRICT	ENT DISTRICT	°C	County Project Number: 04-0162	04-0162
Bid Opening: August 14, 2007 @ 2:30 P.M.			BID NUMBER: 07-21548-9559	548-9559
CONTRACTOR	VIRGINIA LICENSE NOS	Andender	BID SECURIFY	BASE BID
R. M. C. Contractors, Inc.	2701011973		Yes, check	\$117,516.00
Perkinson Construction	2705059460		Yes, bond	\$130,095.22
Godsey & Son, Inc.	2701031647		Yes, bond	\$158,473.00
G. V. Layne Contracting, Inc.	2705067003		Yes, bond	\$158,691.00
Southern Construction Utilities, Inc.	27010011715		Yes, bond	\$180,812.00
Ward & Stancil, Inc.	2701003821		Yes, bond	\$212,198.25

IRONWOOD ROAD SEWER ASSESSMENT DISTRICT



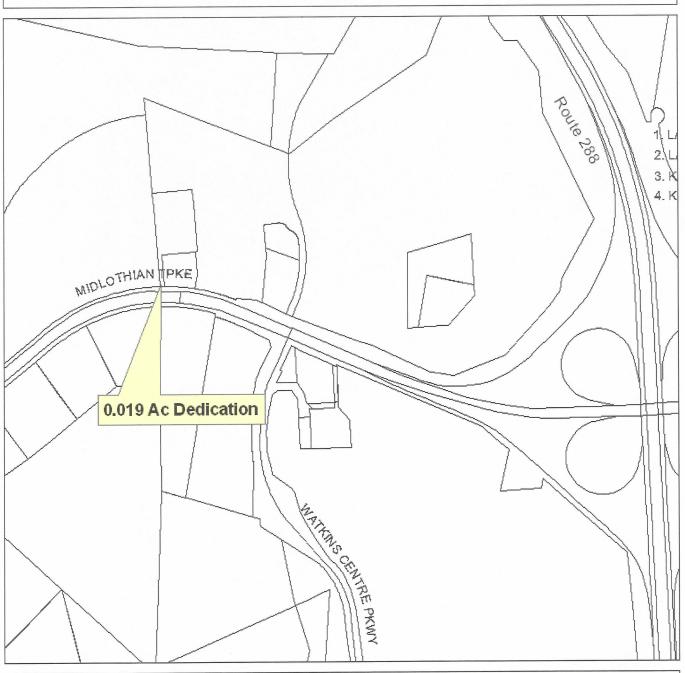
IRONWOOD ROAD WATER ASSESSMENT DISTRICT

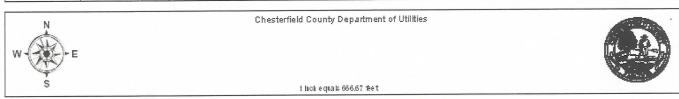


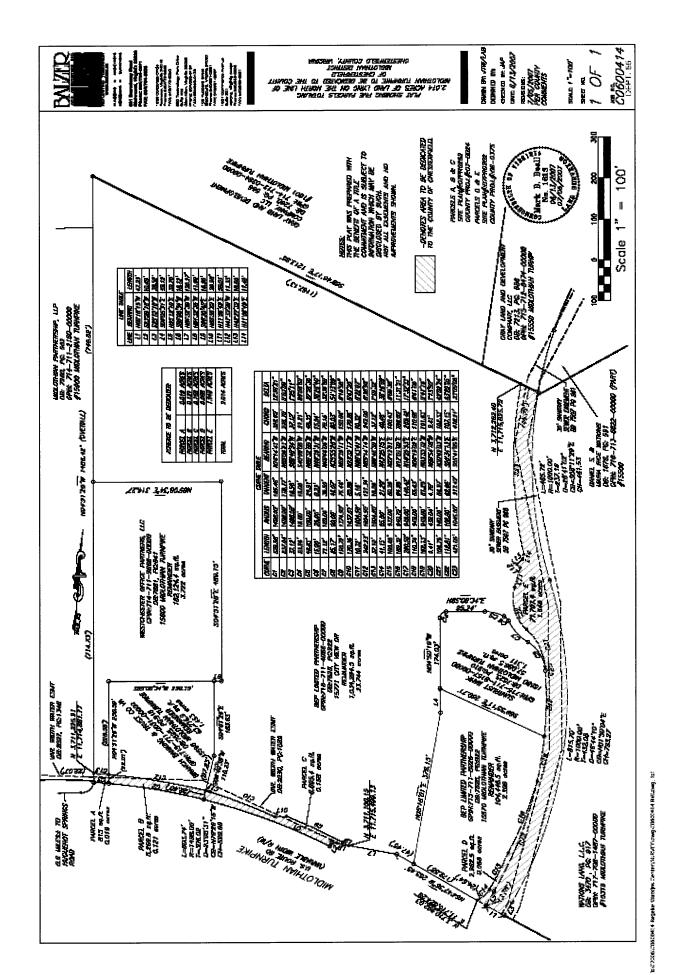


Meeting Date: August	22, 2007	Item Numb	er: 8C.9.a.
Subject:			
Acceptance of a Par Midlothian Turnpike		ng the North Right o	of Way Line of
County Administrator's C	omments:		
County Administrator:	7		
Board Action Requested:			
		of land containing 0. authorize the County A	
Summary of Informati	on:		
parcel of land conta	ining 0.019 acres from Westchester O	pervisors accept the calong the north right ffice Partners, LLC. The chester Phase 1.	of way line of
Approval is recommen	ded.		
District: Midlothian			
Preparer: <u>John W. Har</u>	mon	Title: Right of Way Man	<u>ager</u>
Attachments:	Yes No	o	000078

ACCEPTANCE OF A PARCEL OF LAND ALONG THE NORTH RIGHT OF WAY LINE OF MIDLOTHIAN TURNPIKE FROM WESTCHESTER OFFICE PARTNERS LLC



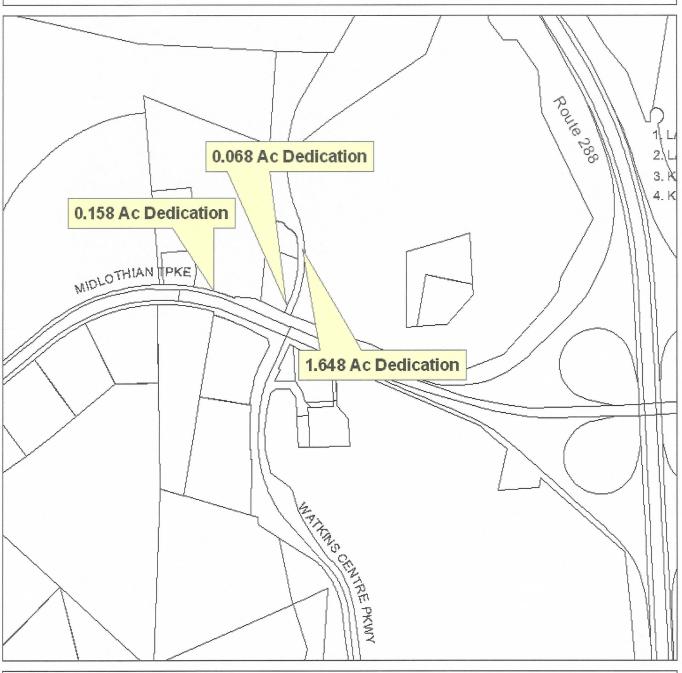




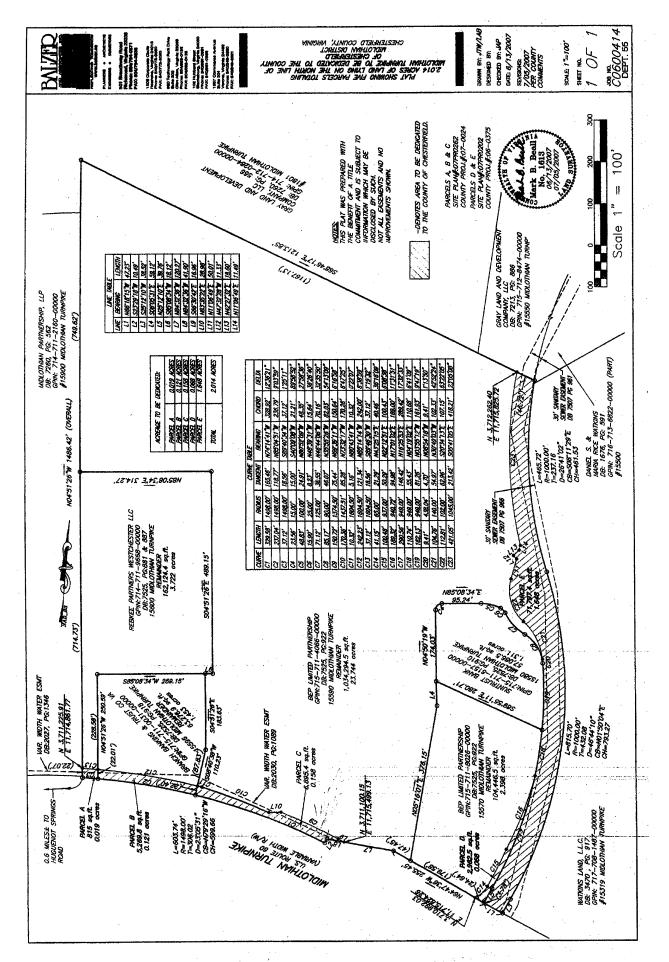


Meeting Date: August 22, 2007	Item Number: 8.	C.9.b.
Subject:		
Acceptance of Parcels of Land Turnpike from BEP Limited Par	for Watkins Centre Parkway and A	Along Midlothian
County Administrator's Comments:		
County Administrator:		
Board Action Requested:		
	ee parcels of land containing a rship, and authorize the County A	
Summary of Information:		
parcels of land containing a	d of Supervisors accept the contotal of 1.874 acres for Watkins from BEP Limited Partnership. Oppes at Westchester Phase 1.	Centre Parkway
Approval is recommended.		
District: Midlothian		
Preparer: <u>John W. Harmon</u>	Title: Right of Way Mana	<u>ager</u>
Attachments: Yes	No	# 000081

ACCEPTANCE OF PARCELS OF LAND FOR WATKINS CENTRE PARKWAY AND ALONG MIDLOTHIAN TURNPIKE FROM BEP LIMITED PARTNERSHIP



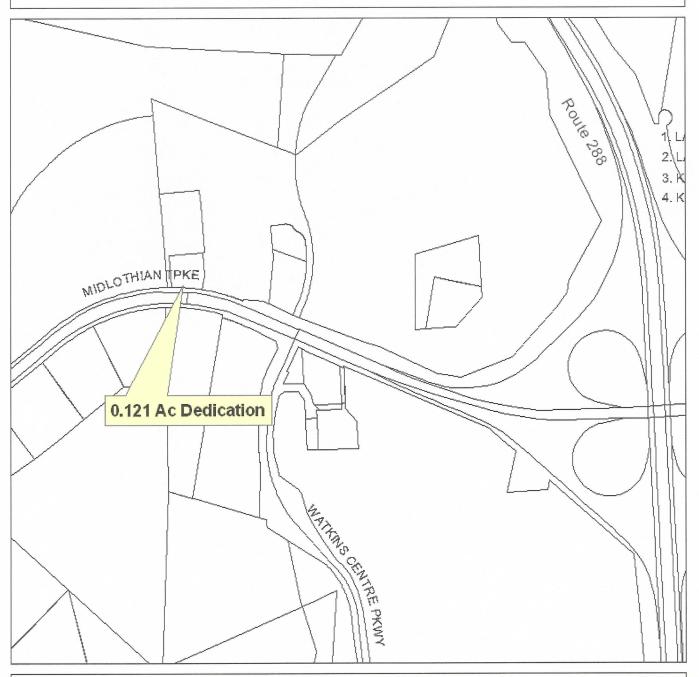






Meeting Date: August 22, 2007	Item Number: 8.C.9.c.
Subject:	
Acceptance of a Parcel of Land Along Midlothian Turnpike from Branch Banking as	
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
Accept the conveyance of a parcel of land Banking and Trust Company of Virginia, and to execute the deed.	_
Summary of Information:	
Staff requests that the Board of Superv parcel of land containing 0.121 acres alo Midlothian Turnpike from Branch Banking as dedication is for the development of Shop	ong the north right of way line of nd Trust Company of Virginia. This
Approval is recommended.	
District: Midlothian	
Preparer: John W. Harmon 1	Fitle: Right of Way Manager
Attachments: Yes No	000084

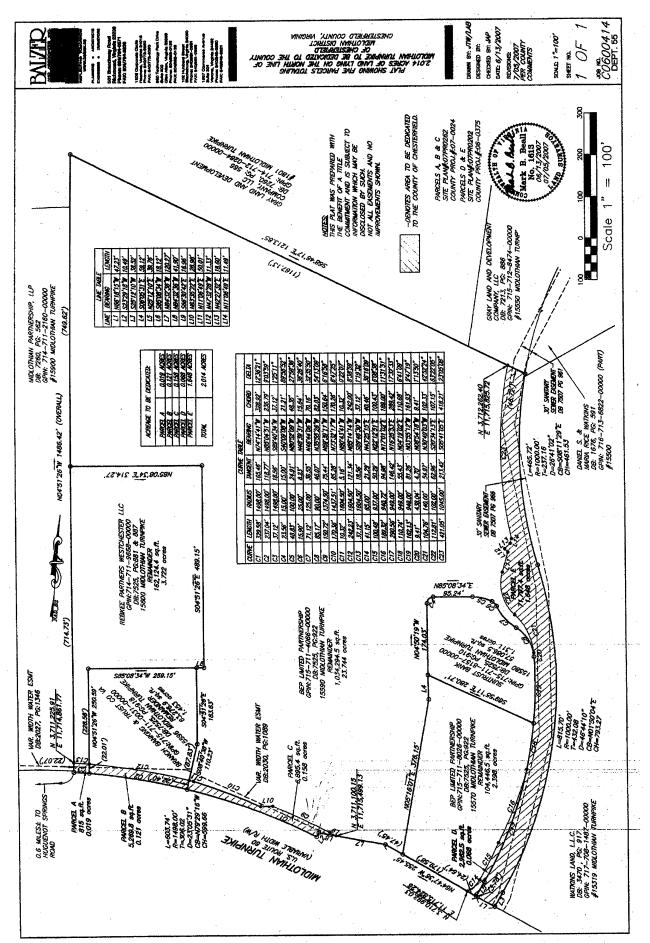
ACCEPTANCE OF A PARCEL OF LAND ALONG THE NORTH RIGHT OF WAY LINE OF MIDLOTHIAN TURNPIKE





Chesterfield County Department of Utilities

fillion equals 666.67 thet

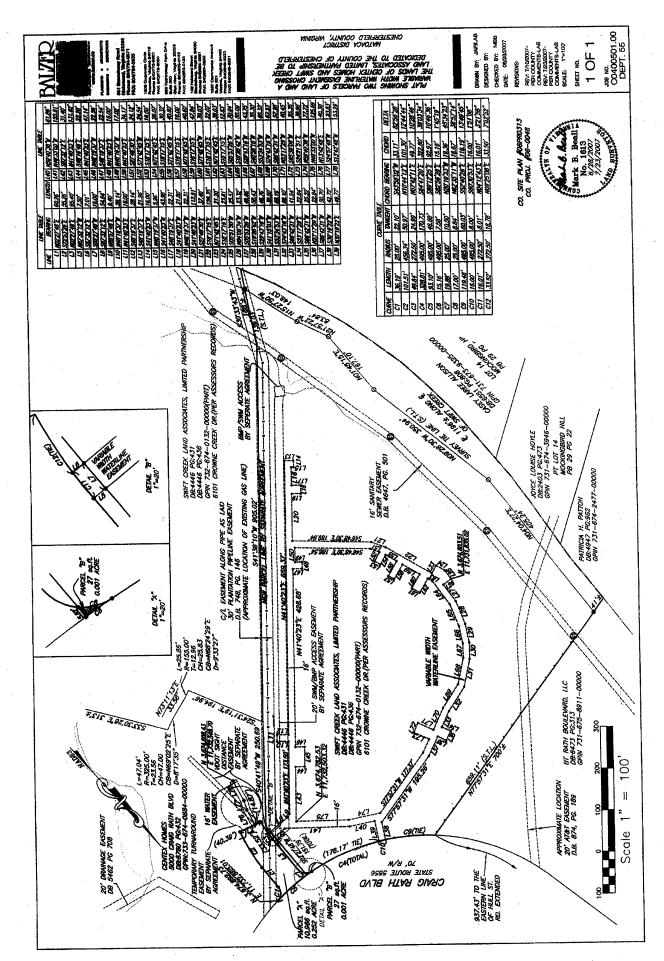




Meeting Date:	August 22, 2007	Item Number: 8.	C.9.d.
Subject:			
	a Parcel of Land d from Centex Hom	d Along the South Right of Wa es	y Line of Craig
County Administ	trator's Comments:		
County Administ			_
		cel of land containing 0.252 ac y Administrator to execute the	
Summary of In	<u>nformation:</u>		
parcel of lan	nd containing 0.25	d of Supervisors accept the of 2 acres along the south right dedication is for the deve	of way line of
Approval is r	ecommended.		
District: Mato	aca		
Preparer: <u>Jol</u>	nn W. Harmon	Title: Right of Way Man	<u>ager</u>
Attachments	Yes	No	[#] 000087

ACCEPTANCE OF A PARCEL OF LAND ALONG THE SOUTH RIGHT OF WAY LINE OF CRAIG RATH BOULEVARD FROM CENTEX HOMES

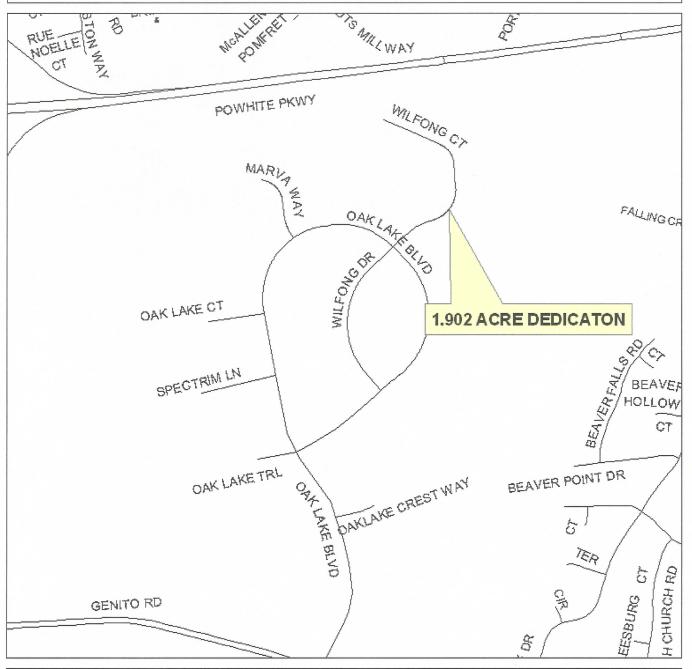






Meeting Date:	August 22, 2007	Item Number:	8.C.9.e.
Subject:			
Acceptance of DuVal	a Parcel of Land fo	or Wilfong Court from Willi	am B. and Gene H.
County Administ	rator's Comments:		
County Administ	rator:		
Board Action Re	<u>quested:</u>		
-		of land containing 1.902 a of the County Administrat	
Summary of In	formation:		
parcel of land		of Supervisors accept the acres for Wilfong Court. T ourt Road Plan.	<u>-</u>
Approval is re	ecommended.		
<u>District:</u> Clove	r Hill		
Preparer: <u>Joh</u>	n W. Harmon	Title <u>: Right of Way Ma</u>	anager
Attachments:	Yes	No	# 000090

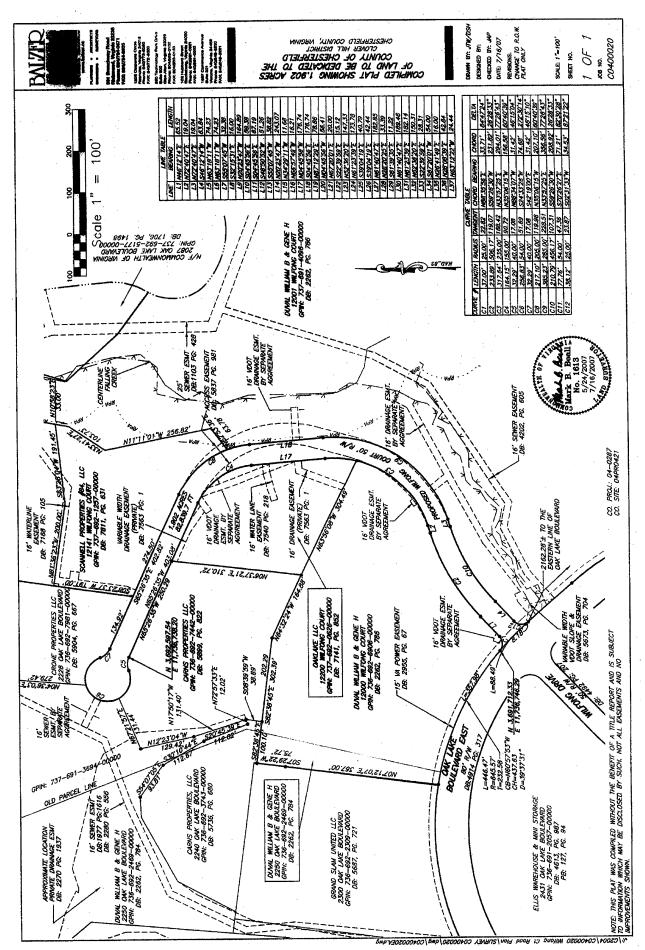
ACCEPTANCE OF A PARCEL OF LAND FOR WILFONG COURT FROM WILLIAM B AND GENE H DUVAL







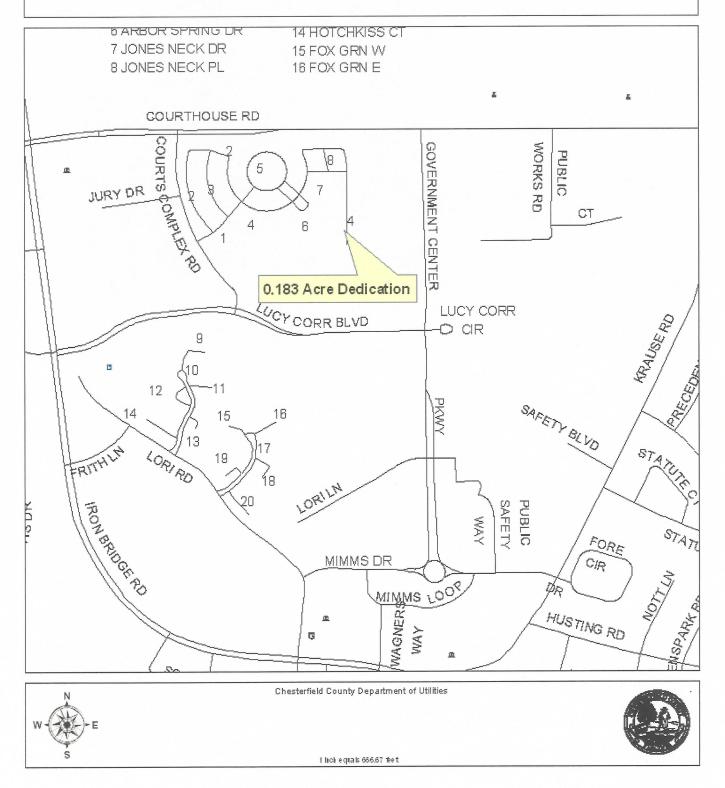
1 Inch equals 666,67 feet

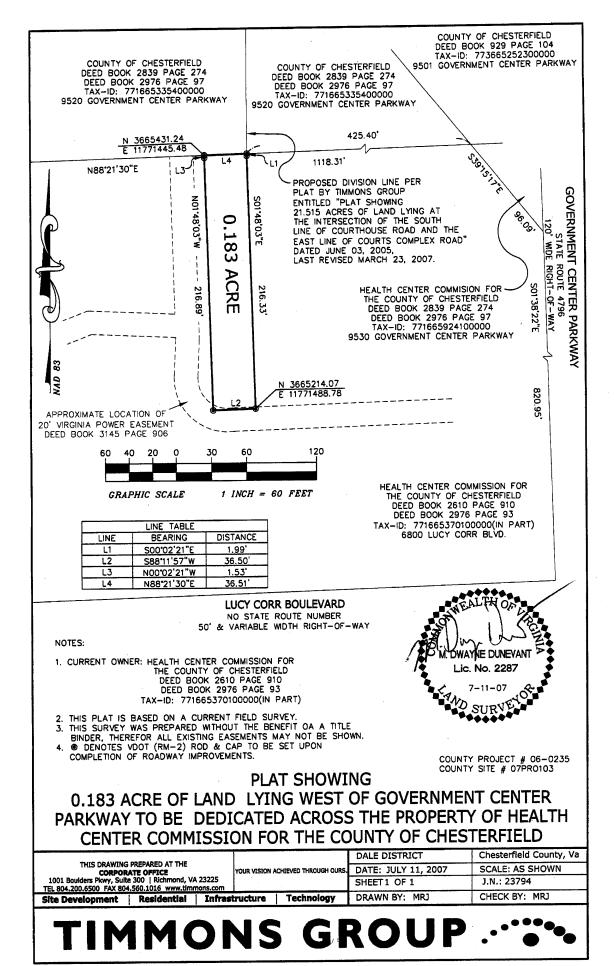




Meeting Date: August 22, 2007	Item Number: 8.C.9.f.
Subject:	
Acceptance of a Parcel of Land for Round Commission for the County of Chesterfield	about Way from the Health Center
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
Accept the conveyance of a parcel of Roundabout Way from the Health Center Chesterfield, and authorize the County Adm	Commission for the County of
Summary of Information:	
Staff requests that the Board of Supervipercel of land containing 0.183 acres for for the development of Springdale at Lucy	Roundabout Way. This dedication is
District: Dale	
Preparer: <u>John W. Harmon</u> T	itle <u>: Right of Way Manager</u>
Attachments: Yes No	# 000093

ACCEPTANCE OF A PARCEL OF LAND FOR ROUNDABOUT WAY FROM THE HEALTH CENTER COMMISSION FOR THE COUNTY OF CHESTERFIELD

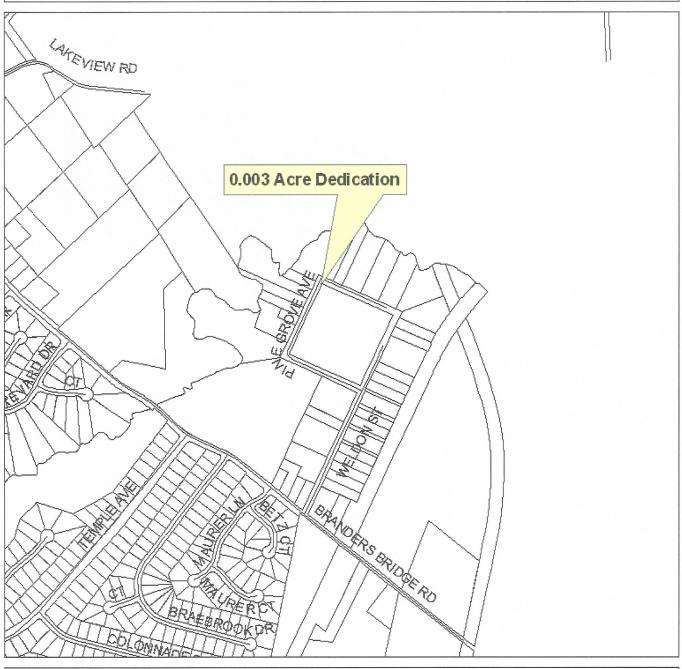






Meeting Date: August 22, 2007 Item Numb	er: 8.C.9.g.
Subject:	
Acceptance of a Parcel of Land Adjacent to Pine Grove Avenue Ingram, Sr.	e from Riley E.
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
Accept the conveyance of a parcel of land containing 0.003 a E. Ingram, Sr., and authorize the County Administrator to ex	
Summary of Information:	
Staff requests that the Board of Supervisors accept the containing 0.003 acres adjacent to Pine Grove dedication is for the development of Brookside, Lots 1 through 16, Block C.	e Avenue. This
Approval is recommended.	
District: Matoaca	
Preparer: <u>John W. Harmon</u> Title <u>: Right of Way Mana</u>	<u>ager</u>
Attachments: Yes No	# 000096

ACCEPTANCE OF A PARCEL OF LAND ADJACENT TO PINE GROVE AVENUE FROM RILEY E INGRAM SR







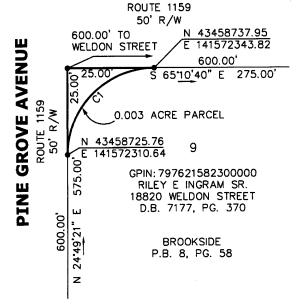
1 Inch equals 650 feet

LOT 9 22,501.00 S.F. R/W -134.13 S.F. LOT 9 22,366.87 S.F. REMAINING

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	25.00'	39,27'	25.00'	90'00'00"	S 69'49'21" W	35.36'

PINE GROVE AVENUE









Based on graphic determination this property is in zone "A3&C" of the Hud defined flood hazard area as shown on F.E.M.A. Flood Insurance Rate Map, Community Panel #510035 0158 B dated 3/16/83

This survey was prepared without the benefit of a title binder and may therefore not show all existing easements or other pertinent facts which may affect the property.

PLAT SHOWING

0.003 ACRE PARCEL TO BE DEDICATED TO CHESTERFIELD COUNTY LOCATED ON LOT 9, BLOCK D BROOKSIDE

MATOACA DISTRICT CHESTERFIELD COUNTY, VIRGINIA

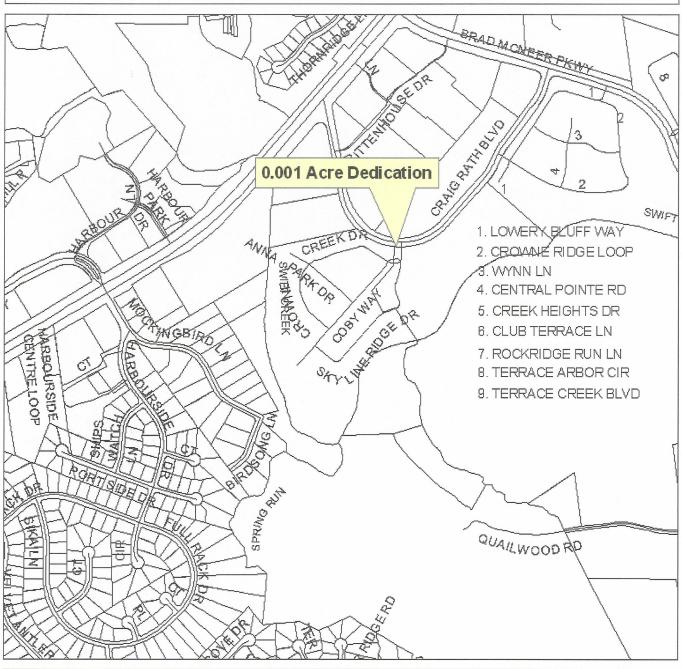
VIRGINIA NORTH CAROLINA WEST VIRGINIA	l L	COUNTY PROJECT #05-0355	
		DATE: NOVEMBER 7, 2006	SCALE: 1"=20'
4260 Crossings Bivd Prince George, VA 23875 TEL 804.541.6600 FAX 804.751.0798 www.timmons.com		REV: MARCH 15, 2007	J.N.: 66743-RW
	tructure Technology	DRAWN BY: JNL	CHECK BY: WMN

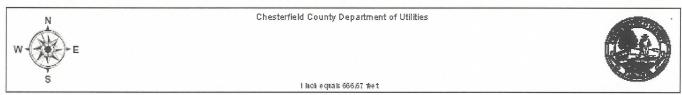
TIMMONS GROUP .***

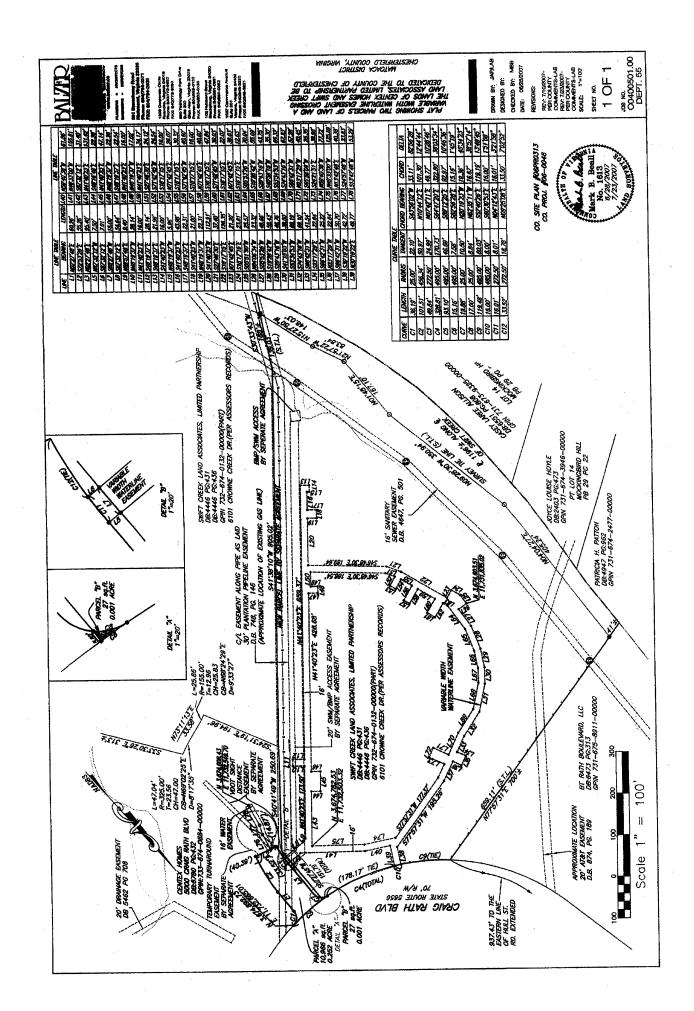


Meeting Date:	August 22, 2007	Item	Number: 8.C.9.h.	
Subject:				
		d Along the South I k Associates, Limit	Right of Way Line of Cra ed Partnership	aig
County Administ	rator's Comments:			
County Administ	rator:			
Board Action Red	IJ			
	tes, Limited Partn		ning 0.001 acres from Swi ze the County Administra	
Summary of In	<u>formation:</u>			
parcel of land	d containing 0.00	1 acres along the	ccept the conveyance of south right of way line r the development of I	of
Approval is re	ecommended.			
District: Matoa	ca			
Preparer: <u>Joh</u>	n W. Harmon	Title <u>: Rig</u> l	nt of Way Manager	
Attachments:	Yes	No	# 00009	9

ACCEPTANCE OF A PARCEL OF LAND ALONG THE SOUTH RIGHT OF WAY LINE OF CRAIG RATH BOULEVARD FROM SWIFT CREEK LAND ASSOCIATES LIMITED PARTNERSHIP



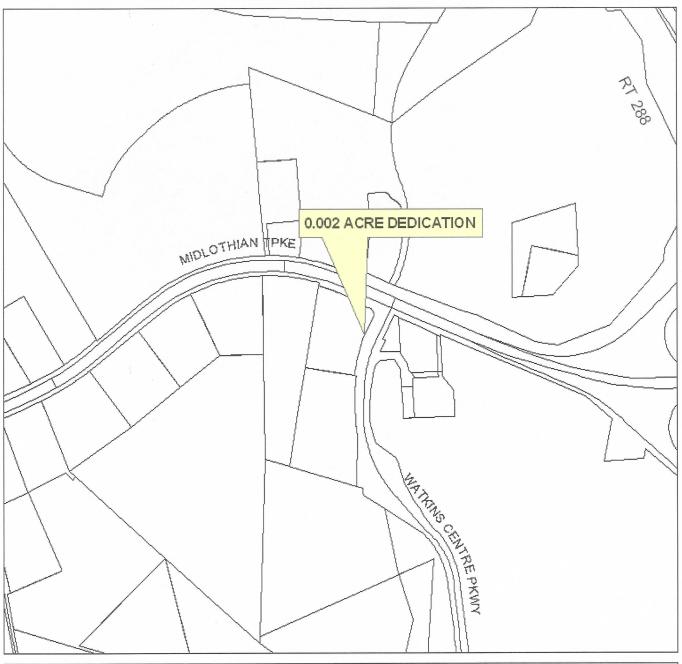


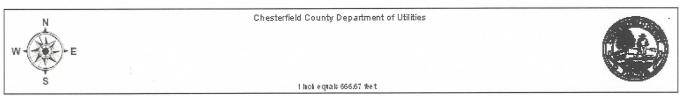


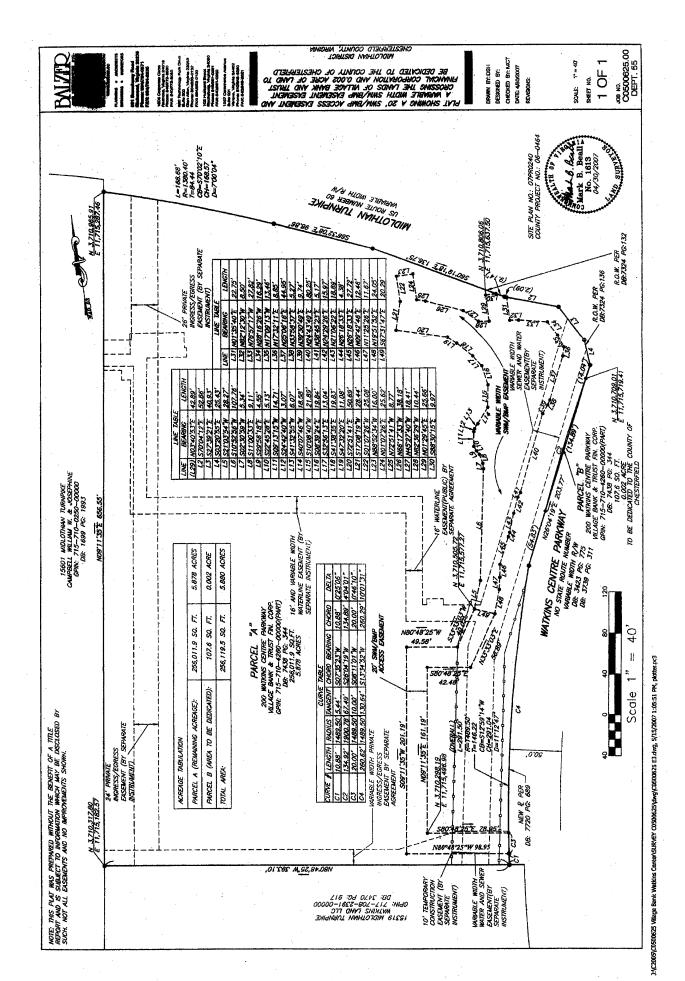


Meeting Date:	August 22, 2007	Item Number:	8.C.9.i.
Subject:			
_		nd Along the West Right of Wa Bank and Trust Financial Corpo	
County Administr	ator's Comments:		
County Administr	ator:		
Board Action Req	uested:		
west right of	way line of Wat	arcel of land containing 0.00 kins Centre Parkway from Villa e the County Administrator to	age Bank and Trust
Summary of Inf	ormation:		
through develo Thoroughfare P	opment to meet to lan. The dedic	nty to acquire right of way the ultimate road width as she cation of this parcel conforms by costs for road improvements	own on the County to that plan, and
<u>District:</u> Midlot	chian		
Preparer: <u>Johr</u>	n W. Harmon	Title: Right of Way Ma	<u>anager</u>
Attachments:	Yes	No	# 000102

ACCEPTANCE OF A PARCEL OF LAND ALONG THE WEST RIGHT OF WAY LINE OF WATKINS CENTRE PARKWAY FROM VILLAGE BANK AND TRUST FINANCIAL CORP



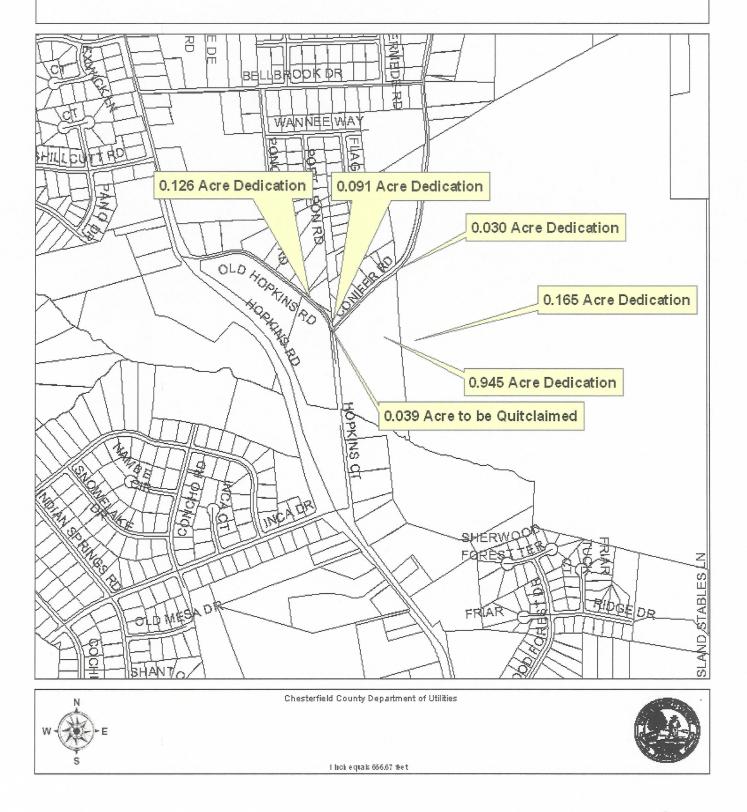


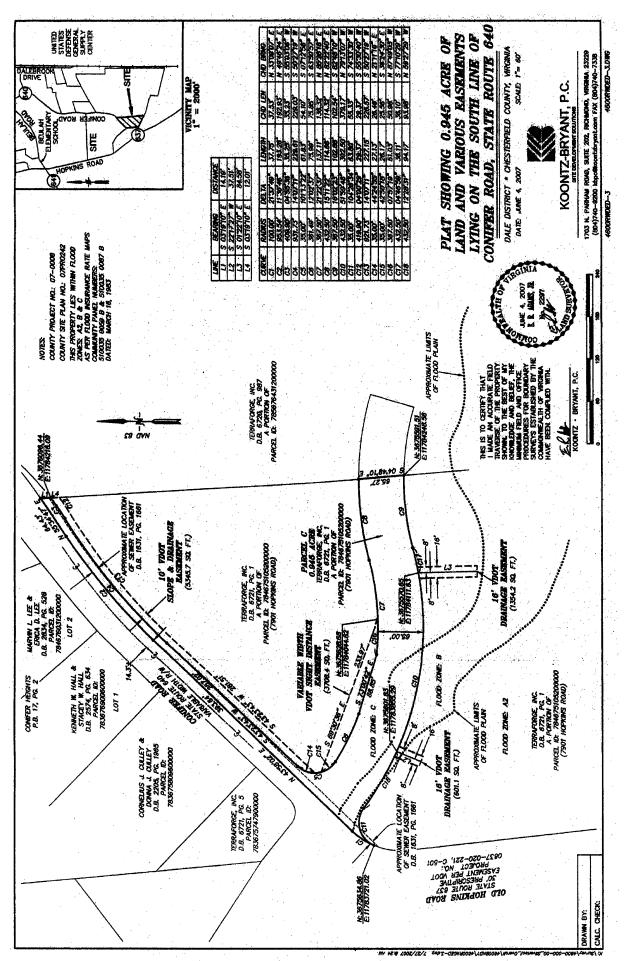


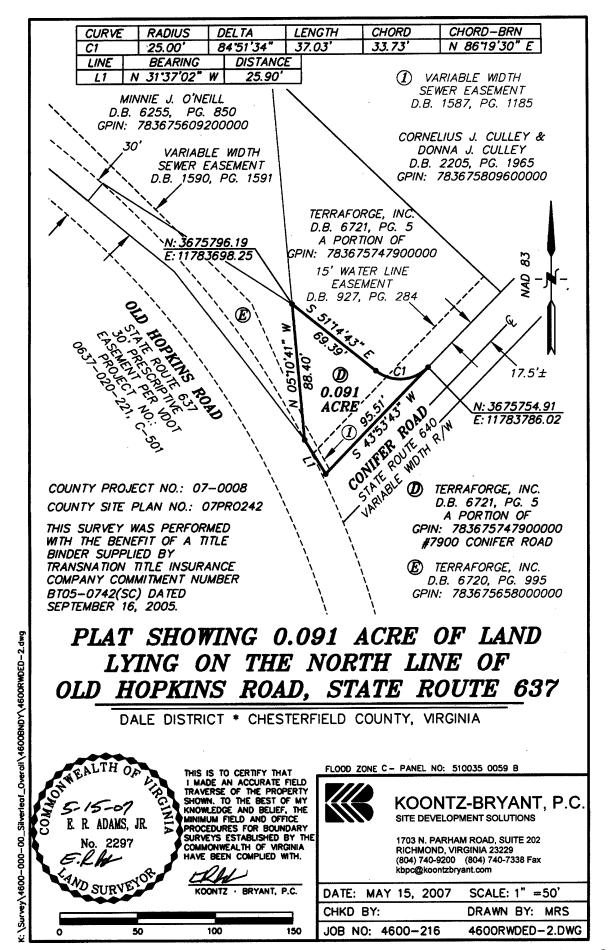


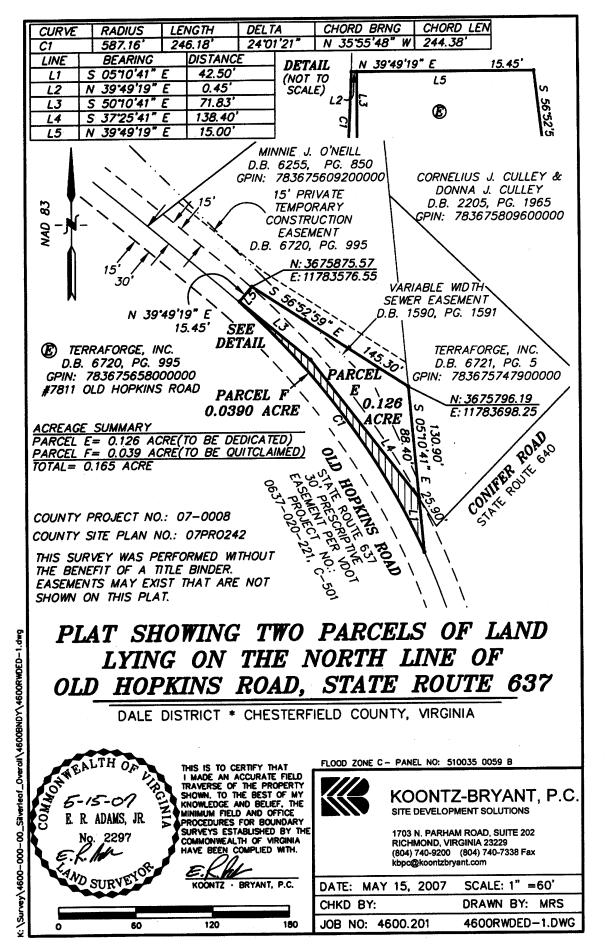
Meeting Date: August 22, 2007	Item Number: 8	3.C.9.j.
Subject:		
Acceptance of Parcels of Land Alor Terraforge, Incorporated	ng Conifer Road and Old He	opkins Road from
County Administrator's Comments:		
County Administrator:		
Board Action Requested:		
Accept the conveyance of six parcacres from Terraforge, Inc., and execute the deed.	els of land containing a l authorize the County <i>I</i>	total of 1.396 Administrator to
Summary of Information:		
Staff requests that the Board of parcels of land containing a total Hopkins Road. This conveyance is for Recreation Center.	of 1.396 acres along Coni	fer Road and Old
Approval is recommended.		
District: Dale		
:		
Preparer: <u>John W. Harmon</u>	Title: Right of Way Mai	nager
Attachments: Yes	No	000105

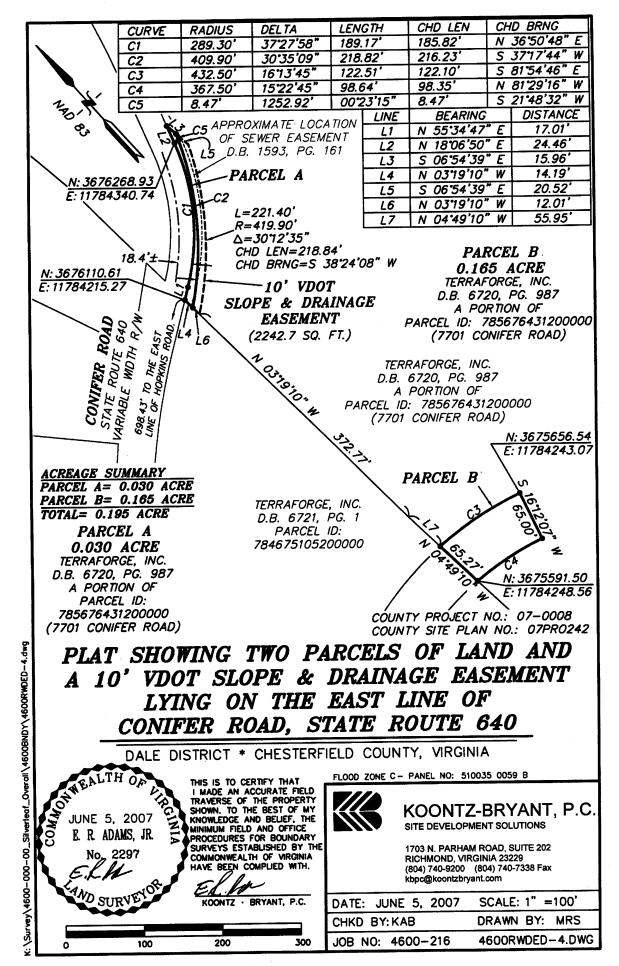
ACCEPTANCE OF PARCELS OF LAND ALONG CONIFER ROAD AND OLD HOPKINS ROAD FROM TERRAFORGE INC







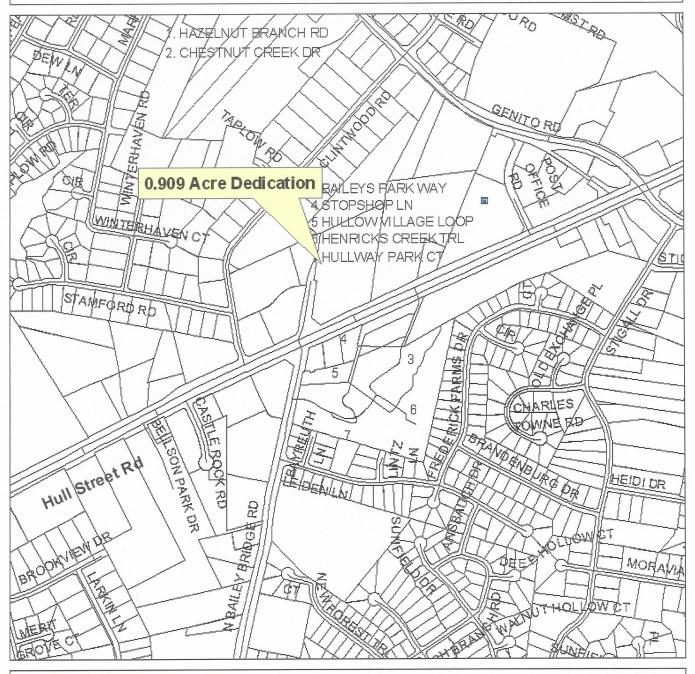






Meeting Date: August 22, 2007	em Number: 8.C.9.k.
Subject:	
Acceptance of a Parcel of Land for the Extension of I from Shamrock Associates, LLC	North Bailey Bridge Road
County Administrator's Comments:	
County Administrator:	
Board Action Requested:	
Accept the conveyance of a parcel of land contact Shamroack Associates, LLC, and authorize the County the deed.	•
Summary of Information:	
Staff requests that the Board of Supervisors acceparcel of land containing 0.909 acres for the ext Bridge Road. This conveyance is for the development of 1979.	ension of North Bailey
Approval is recommended.	
District: Clover Hill	
Preparer: John W. Harmon Title: Right of	⁻ Way Manager
Attachments: Yes No	000111

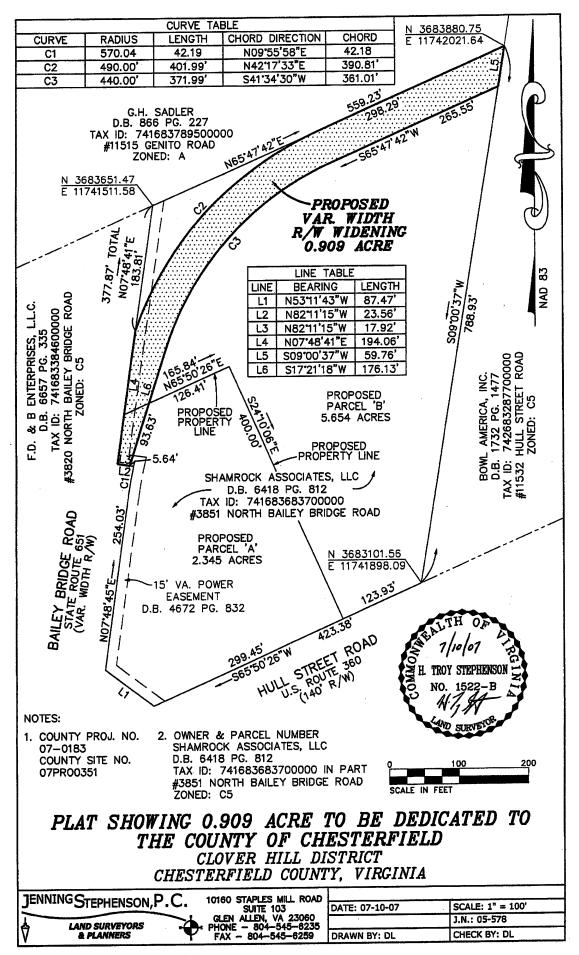
ACCEPTANCE OF A PARCEL OF LAND FOR THE EXTENSION OF NORTH BAILEY BRIDGE ROAD FROM SHAMROCK ASSOCIATES LLC





Chesterfield County Department of Utilities







Meeting Date: August 22, 2007 Item Number: 8.	C.10.		
Subject:			
Approval of Lease Assignment to Crown Communication, Incorpo	rated		
County Administrator's Comments:			
County Administrator:			
Board Action Requested:			
Authorize the County Administrator to execute a lease assignapproved by the County Attorney.	nment in a form		
Summary of Information:			
On April 11, 2007 the Board approved a lease with New Cingular Wireless for a communications tower at the County Fairgrounds/Salem Middle School. New Cingular Wireless requests approval to assign the lease to Crown Communication, Inc. Crown Communication will assume all obligations and liabilities in the agreement.			
District: Dale			
Preparer: <u>John W. Harmon</u> Title <u>: Right of Way Mana</u>	ager		
Attachments: Yes No	# 000114		

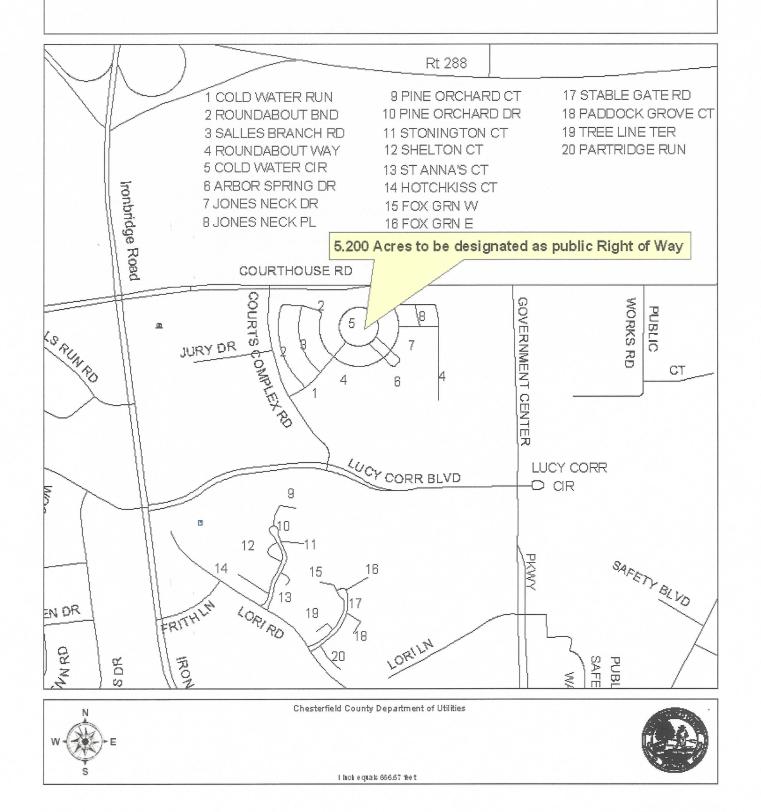


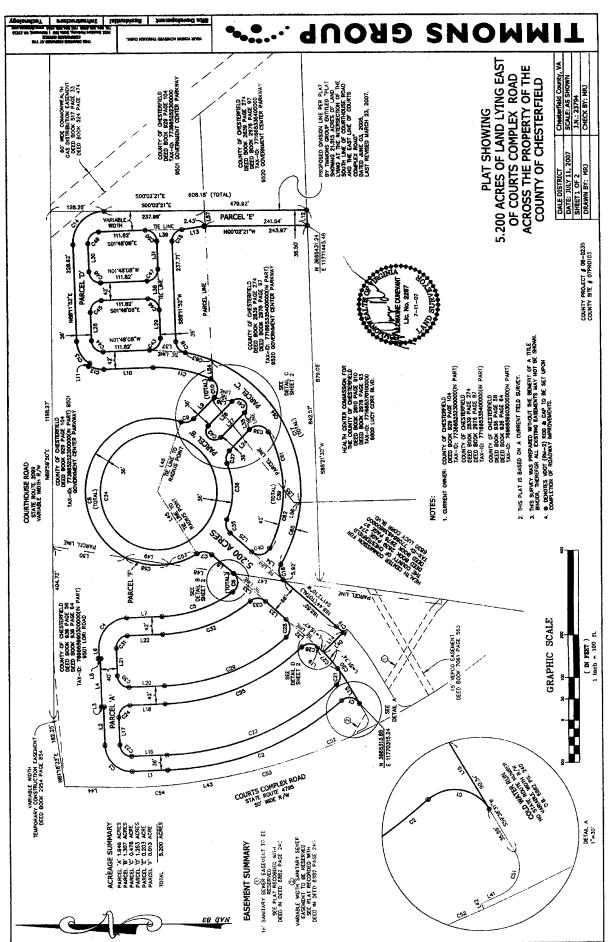
Meeting Date: Augus	it 22, 2007	Item Number: 8.C.	<u>11. </u>
Subject:			
Approval of a Sales Medical Services Sta		n for Harrowgate R	oad Fire/Emergency
County Administrator's C	omments:		
County Administrator:)		
Board Action Requested	<i>/</i> -		
Approve a sales con less, from the Trust the Harrowgate Road to execute the adder	ees for the Colonia Fire/EMS Station, a	al Heights Assembly	of God Church, for
Summary of Informati	on:		
Staff requests that addendum for the property of the property of the property of the contract calls for able to meet this date of the contract calls for able to meet this date.	ourchase of 5.8 a om the Trustees fo closing date by th or closing by Augus	cres, more or le or Colonial Height hirty-one days to S t 27, 2007; however	ss, part of PIN: s Assembly of God September 27, 2007. , the church is not
Approval is recommen	ded.		
District: Bermuda			
Preparer: <u>John W. Ha</u>	mon	Title <u>: Right of Way I</u>	Manager
Attachments:	Yes		# 000115



Meeting Date: August 22, 2007	Item Number: 8.C.12.
Subject:	
Designation of Right of Way for Roads Within	Lucy Corr Village
County Administrator's Comments:	
County Administrator: Board Action Requested:	
Designate right of way for roads within Lucy County Administrator to execute the Declaration	_
Summary of Information:	
In order to provide state maintenance for road is necessary that 5.200 acres of county propright of way.	-
Approval is recommended.	
District: Dale	
Preparer: <u>John W. Harmon</u> Title:	Right of Way Manager
Attachments: Yes No	# 000116

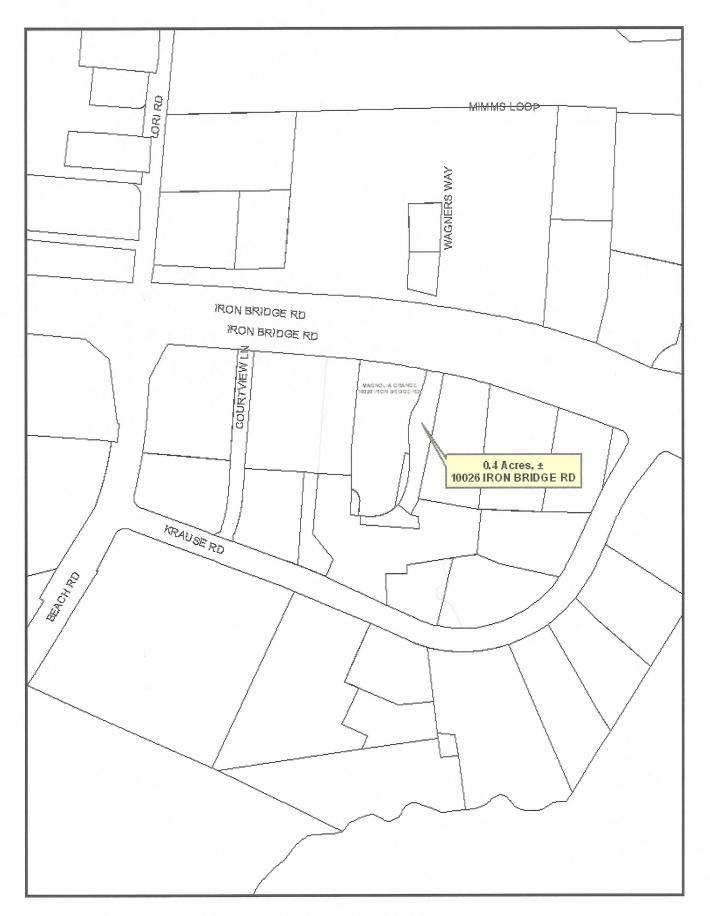
DESIGNATION OF RIGHT OF WAY FOR ROADS WITHIN LUCY CORR VILLAGE







Meeting Date:	August 22, 2007	Item Number:	8.C.13.
Subject:			
Approval of a Adjacent to Ma		Donation of a Parcel	of Land to the County
County Administ	rator's Comments:		
County Administr	rator:		
Board Action Rec	quested:		
more or less,	adjacent to Magno	tion of a parcel of land lia Grange from Magnolia istrator to execute the	a Investment Associates
Summary of In	formation:		
donation of a Magnolia Grang Grange is loca	parcel of land co ge (10026 Iron Bri ated on this parce	of Supervisors approventaining 0.4 acres, more idge Road). The existing el. Acquisition costs, is 5,000.00. Funds are ava	e or less, adjacent to g driveway to Magnolia ncluding a Phase I ESA
District: Dale			
	1		
Preparer: <u>Joh</u>	n W. Harmon	Title <u>: Right of V</u>	Vay Manager
Attachments:	Yes	No	# 000119





Meeting Date:	August 22, 2007	Item Number: 8.C.14.a.
Subject:		
Set Date for a a Regional Wate	Public Hearing to Consider Adoptioner Supply Plan	n of a Resolution Approving
County Administra	ator's Comments:	
County Administra		
	that the Board of Supervisors set blic hearing to consider adopting Supply Plan.	
Summary of Info	ormation:	
plans for local fellow members to participate & Veath/Wiley as well as cit now complete.	eneral Assembly has mandated the dities throughout the Commonwealth. of the Appomattox Regional Water Au in developing a regional water supp and Wilson were selected to develop izen input were incorporated into Local approval of the document is reent of Environmental Quality for st	Chesterfield County and its thority (ARWA) have elected by plan. The firms of Black this plan. Staff comments, the document. This plan is required prior to submittal
<u>District:</u>		
Preparer: Roy E.	Covington Title: Director	r of Utilities
Attachments:	Yes	# 000 121



Meeting Date:	August 22, 2007	Item Number: 8	.C.14.b.
Subject:			
	Public Hearing to Consid c Water During Drought	-	-
County Administra	tor's Comments:		
County Administra	tor:		
Board Action Requ	ested:		
date for a publ	that the Board of Superic hearing to consider a ic Water During Drought	an "Ordinance Adopting	Restrictions on
Summary of Info	ormation:		
plans for local plan requires t use of public w	eneral Assembly has mand lities throughout the Co hat the locality adopt a vater during drought and will satisfy these requ	ommonwealth. Part of tappropriate ordinances /or emergency condition	the water supply to restrict the ons. Adoption of
<u>District:</u>			
Preparer: Roy E. 0	Covington	Title: Director of Utilities	
Attachments:	Yes	ı	# 000122



Meeting Date: August 22, 2007

Page 1 of 2

Item Number: 8.C.14.c.

Subject:
Set a Public Hearing to Consider Adoption of an Ordinance Establishing a Special Assessment for the Lower Magnolia Green Community Development Authority and Approval of a Special Assessment Agreement with the Lower Magnolia Green Community Development Authority Regarding the Financing of Certain Infrastructure
County Administrator's Comments:
County Administrator: Board Action Requested:
Set a public hearing date for September 26, 2007 to 1) consider adoption of an ordinance establishing a special assessment for the Lower Magnolia Green Community Development Authority (CDA); and 2) approval of a Special Assessment Agreement between the Board of Supervisors, the Lower Magnolia Green CDA and Owner(s) of Property within the CDA District. Summary of Information:
Today's agenda includes an item requesting the Board of Supervisors to hold a public hearing to consider the adoption of an ordinance to create the Lower Magnolia Green CDA. Additionally, a separate item is on today's agenda requesting the Board to make initial appointments to the Lower Magnolia Green CDA Board. The CDA Board is scheduled to meet on August 28, 2007 to request that the Board of Supervisors, through adoption of an ordinance, establish a special assessment on property within the CDA District for the purpose of financing certain transportation improvements benefiting property within the CDA District.
Preparer: Francis M. Pitaro Title: Acting Deputy County Administrator
Attachments: Yes No # 000123

BOARD OF SUPERVISORS AGENDA

Page 2 of 2

Meeting Date: August 22, 2007

Summary of Information (continued)

The special assessments will be established and apportioned in accordance with the Rate and Method of Apportionment of Special Assessments, which is scheduled to be approved by the CDA Board on August 28th. The special assessments shall be liens on the taxable real property in the CDA District.

The proposed ordinance will authorize a Special Assessment Agreement between the Board of Supervisors, the Lower Magnolia Green CDA and land owner(s) within the CDA District, that approves the issuance of the Authority's bonds to finance certain infrastructure within the CDA District.

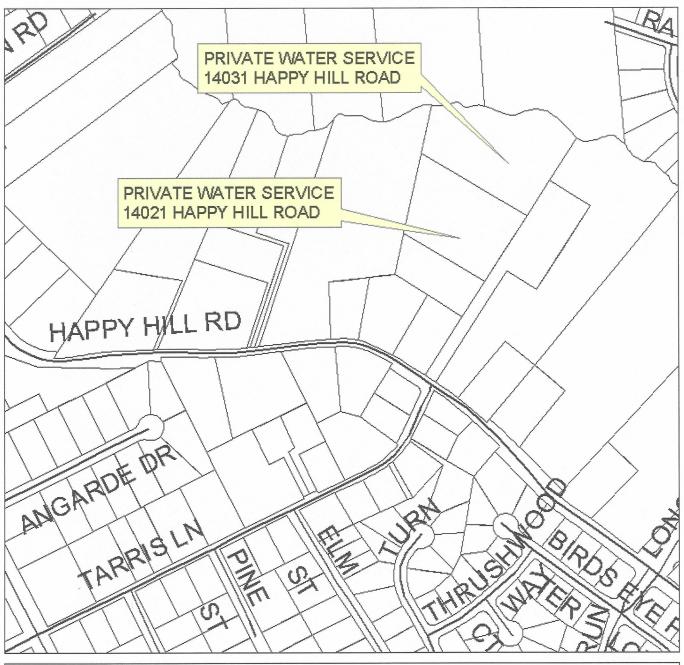
The Board is requested to adopt the proposed ordinance after the public hearing is held. Upon adoption of the ordinance, the Lower Magnolia Green CDA will move forward to issue its bonds to finance the infrastructure improvements.

The establishment of a special assessment on property within the CDA District and the actions contemplated by the Special Assessment Agreement will provide for needed infrastructure improvements to serve the residents and businesses in the District, as well as residents and businesses in the surrounding community as necessary to meet the increased demands placed upon the County as a result of development within the Lower Magnolia Green Property. Additionally, this action will permit these infrastructure improvements to be constructed more expeditiously than would otherwise be possible.



Meeting Date: August 22, 2007	Item Number:	8.C.15.a.
Subject:		
Request Permission to Install Easement to Serve Properties at		
County Administrator's Comments:		
County Administrator: Board Action Requested:		
Grant Franklin M. Sheffield and private water services within a Administrator to execute the wat	a private easement and	authorize the County
Summary of Information:		
Franklin M. Sheffield and Bever install private water services wat 14021 and 14031 Happy Hill Roand approval is recommended.	vithin a private easeme:	nt to serve properties
District: Bermuda		
Preparer: John W. Harmon	Title: Right of W	/ay Manager
Attachments: Yes	No	# 000125

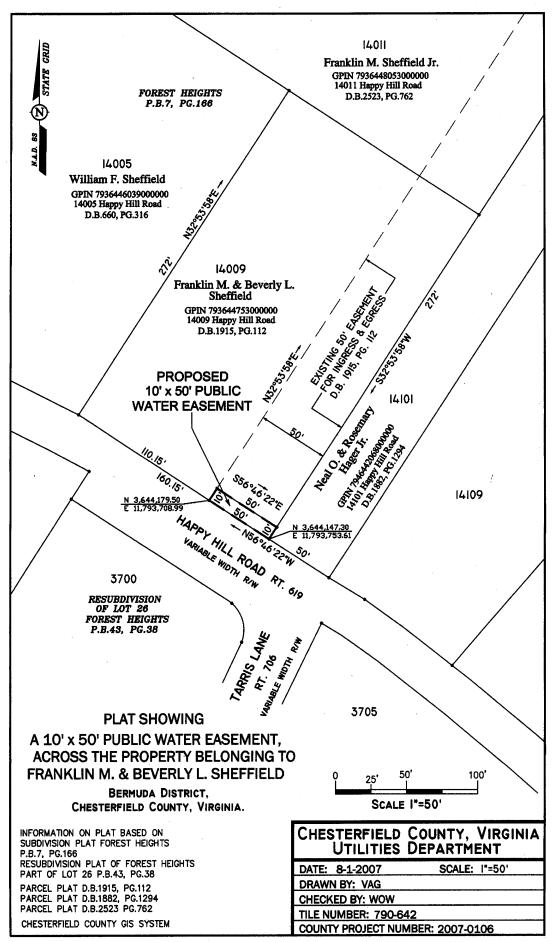
REQUEST PERMISSION TO INSTALL PRIVATE WATER SERVICES WITHIN A PRIVATE EASEMENT TO SERVE PROPERTIES AT 14021 AND 14031 HAPPY HILL ROAD





Chesterfield County Department of Utilities

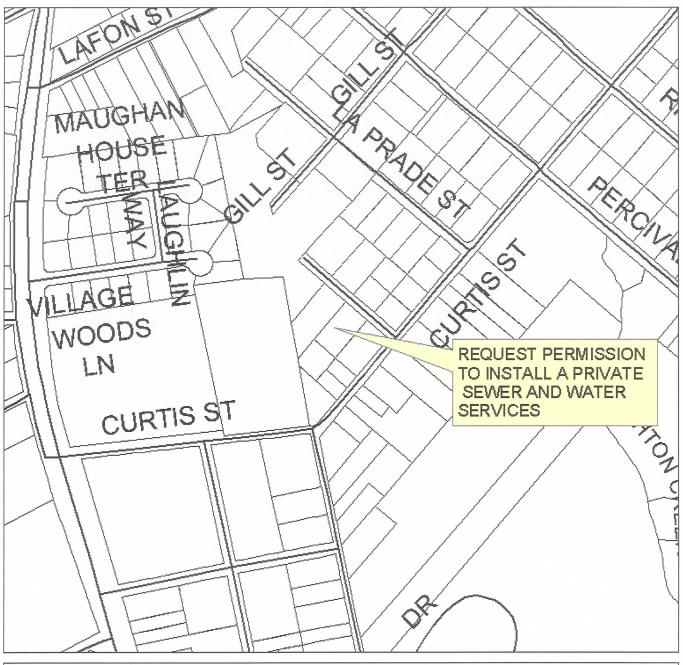






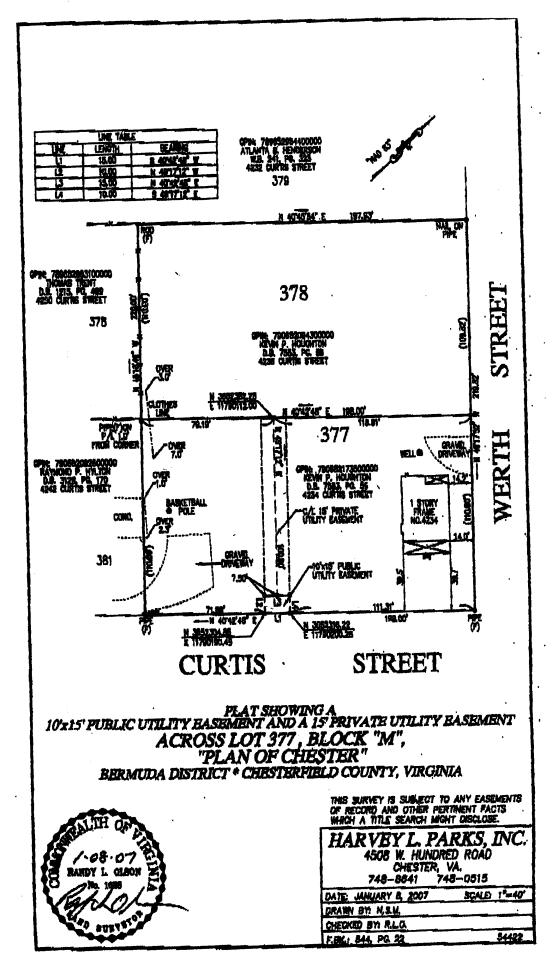
Meeting Date:	August 22, 2007		Item Number: 8.	C.15.b.
Subject:				
_	ssion to Install ent to Serve Prop		wer and Water Ser Curtis Street	vices Within a
County Administ	rator's Comments:			
County Administ	rator:			
Board Action Rec	\mathcal{O}			
services with		ment and aut	install private sonorize the County A	
Summary of In	<u>formation:</u>			
water service	s within a priva	te easement	ion to install pri to serve property staff and approval	at 4236 Curtis
<u>District:</u> Bermu	da			
Preparer:Joh	n W. Harmon	Т	itle <u>: Right of Way Mana</u>	ager
Attachments:	Yes	No		# 000128

REQUEST PERMISSION TO INSTALL PRIVATE SEWER AND WATER SERVICES WITHIN A PRIVATE EASEMENT TO SERVE PROPERTY AT 4236 CURTIS STREET





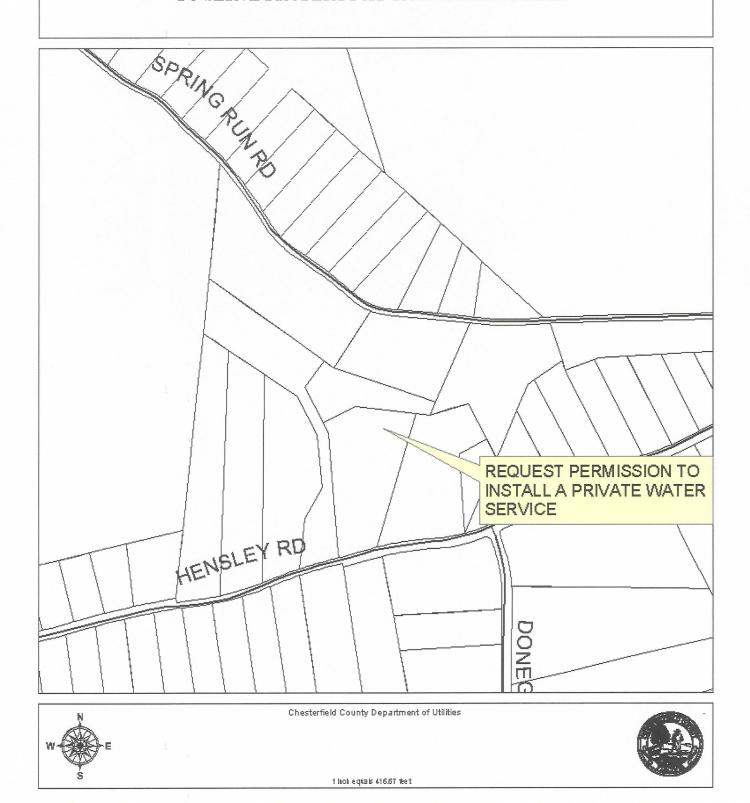
1 Inch equals 333,33 feet

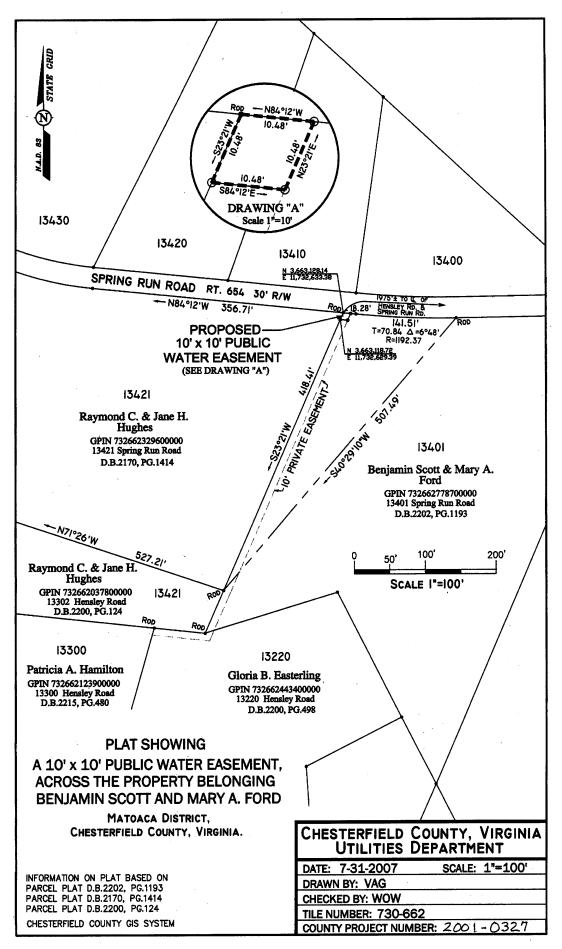




Meeting Date:	August 22, 2007		Item Number:	8.C.15.c.
Subject:				
		ll a Private Wa 13300 Hensley R		ithin a Private
County Administ	rator's Comments:			
County Administ	rator:			
Board Action Rec	quested:			
within a priva		authorize the C		te water service rator to execute
Summary of In	formation:			
service within	n a private ease		coperty at 132	a private water 20 Hensley Road. commended.
District: Bermu	da			
Preparer: Joh	n W. Harmon	Title:_	Right of Way Ma	nager
Attachments:	Yes	No		# 000131

REQUEST PERMISSION TO INSTALL A PRIVATE WATER SERVICE WITHIN A PRIVATE EASEMENT TO SERVE PROPERTY AT 13300 HENSLEY ROAD

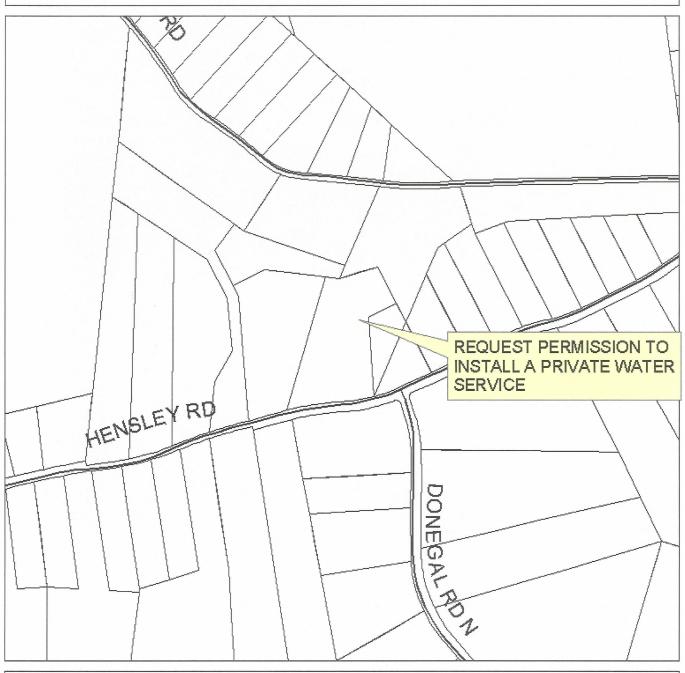


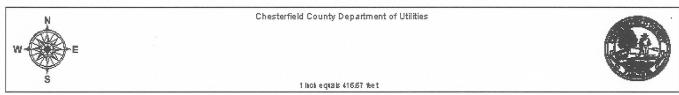


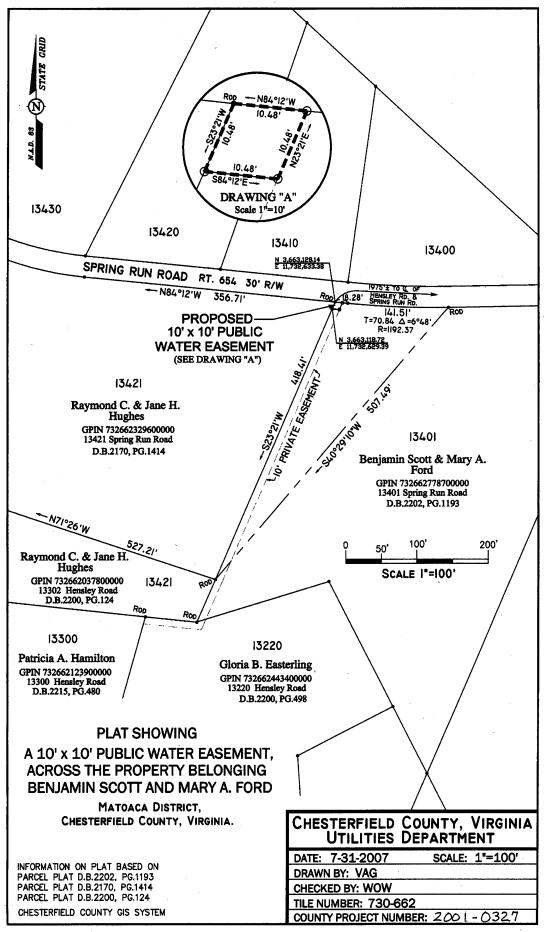


Meeting Date: August 22, 2007 Item N	umber: 8.C.15.d.
Subject:	
Request Permission to Install a Private Water Service Easement to Serve Property at 13220 Hensley Road	e Within a Private
County Administrator's Comments:	
County Administrator: Board Action Requested:	
Grant Gloria B. Easterling, permission to install a pr within a private easement and authorize the County Admir the water connection agreement.	
Summary of Information:	
Gloria B. Easterling has requested permission to insta service within a private easement to serve property at This request has been reviewed by staff and approval is	13220 Hensley Road.
District: Bermuda	
Preparer: John W. Harmon Title: Right of Way	Manager Manager
Attachments: Yes No	# 000134

REQUEST PERMISSION TO INSTALL A PRIVATE WATER SERVICE WITHIN A PRIVATE EASEMENT TO SERVE PROPERTY AT 13220 HENSLEY ROAD



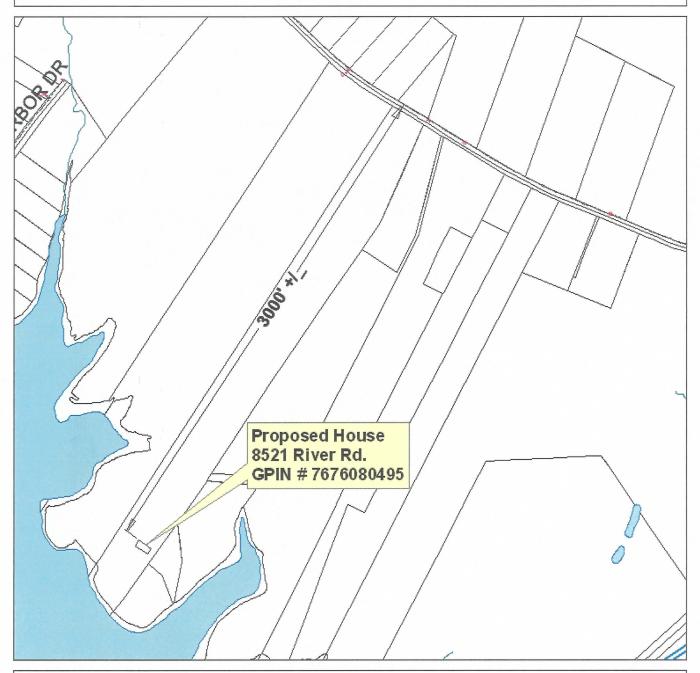






weeting Date: Augu	St 22, 2007	item number:	8.C.15.e.
Subject:			
		for an Exception to cture Located at 8521	
County Administrator's	Comments:		
County Administrator:	9		
Board Action Requested approve R. L. Dunn's		mends that the Boar xception to the use o	-
Summary of Informat	ion:		
exception to the us 8521 River Road. U Board of Supervisors water when a new res of more than 1,000 to	se of public water inder Section 18-63 as may grant an excesidential structure feet. The line wi	letter from R. L. D for a proposed home of the Chesterfield eption to the requirer e requires an onsite value of put tion to the use of put	to be located at County Code, the ment to use public water service line 000 feet, thereby,
District: Mato	aca		
Preparer: William O	. Wright Ti	tle: <u>Assistant Director of U</u>	<u>Utilities</u>
Attachments:	Yes	0	# 000137

VICINITY SKETCH 8521 River Rd.





Chesterfield County Department of Utilities



August 8,2007

R.L. Dunn III 8521 River Road Petersburg, VA 23803-1025

Bill Wright Dept of Utilities Chesterfield, VA 23832

Reference permit #2007-08-07-039

Dear Mr. Wright

Steve Blackburn advised me to request a variance on not hooking up to county water. My new home will be an estimated 2,833 feet from River Road. Two years ago department of utilities told me that I did not need to hook up to county water. I then applied for a well permit and had my well installed.

Please fell free to contact me at 804-586-9321.

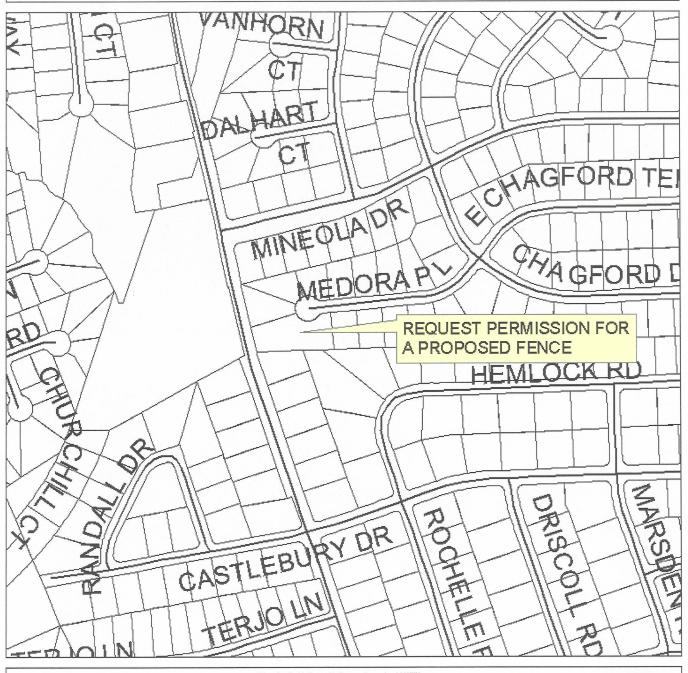
Sincerely;

R.L. Dunn



Meeting Date:	August 22, 2007	Item Number: 8.	C.15.f.			
Subject:						
Request Permission for a Proposed Fence to Encroach Within a Variable Width Storm Water Management System/Best Management Practice Easement and a Sixteen-Foot Sewer Easement and a Fifty-Foot buffer Across Lot 2, Mineola, A Resub of Lots 6 and 7, Section E						
County Administ	rator's Comments:					
County Administ	rator:					
Board Action Rec	quested:					
Grant Joseph Stover and Terrica Stover, permission for a proposed fence to encroach within a variable width SWM/BMP easement and a 16' Sewer Easement and a 50' buffer across Lot 2, Mineola, A Resub of Lots 6 and 7, Section E, subject to the execution of a license agreement.						
Summary of In	formation:					
Joseph Stover and Terrica Stover, have requested permission for a proposed fence to encroach within a variable width SWM/BMP Easement and a 16' Sewer Easement and a 50' buffer across Lot 2, Mineola, A Resub of Lots 6 and 7, Section E. This request has been reviewed by staff and approval is recommended.						
District: Bermu	da					
Preparer:Joh	n W. Harmon	Title: Right of Way Man	<u>ager</u>			
Attachments:	Yes	No	000140			

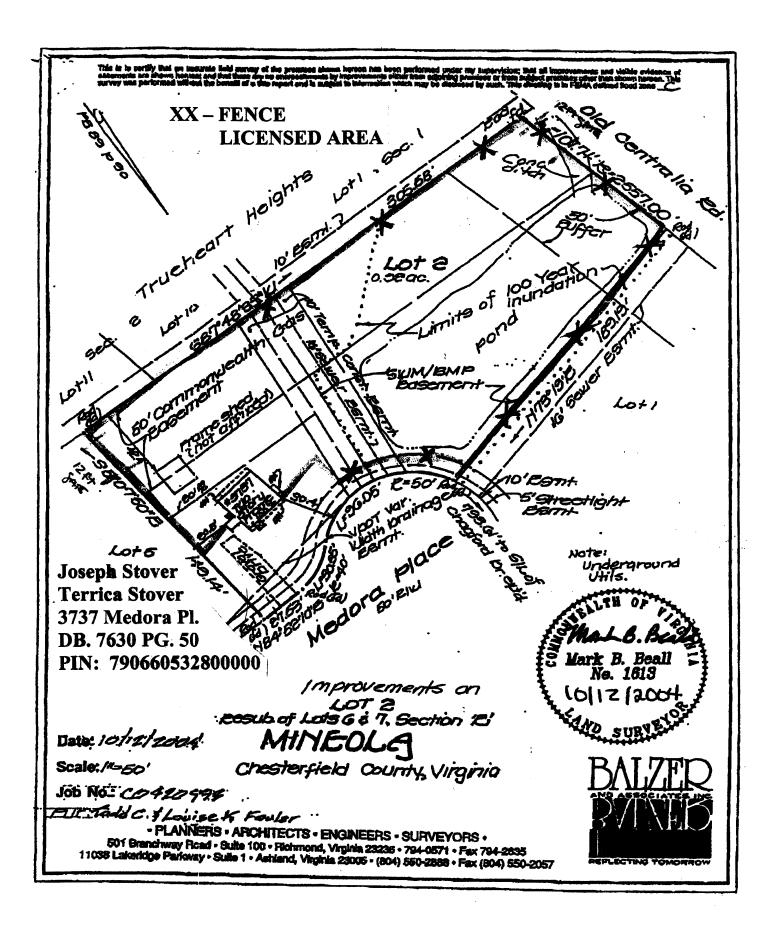
REQUEST PERMISSION FOR A PROPOSED FENCE TO ENCROACH WITHIN A VARIABLE WIDTH SWM/BMP EASEMENT AND A 16' SEWER EASEMENT AND A 50' BUFFER ACROSS LOT 2 MINEOLA A RESUB OF LOTS 6 AND 7 SECTION E





Chesterfield County Department of Utilities

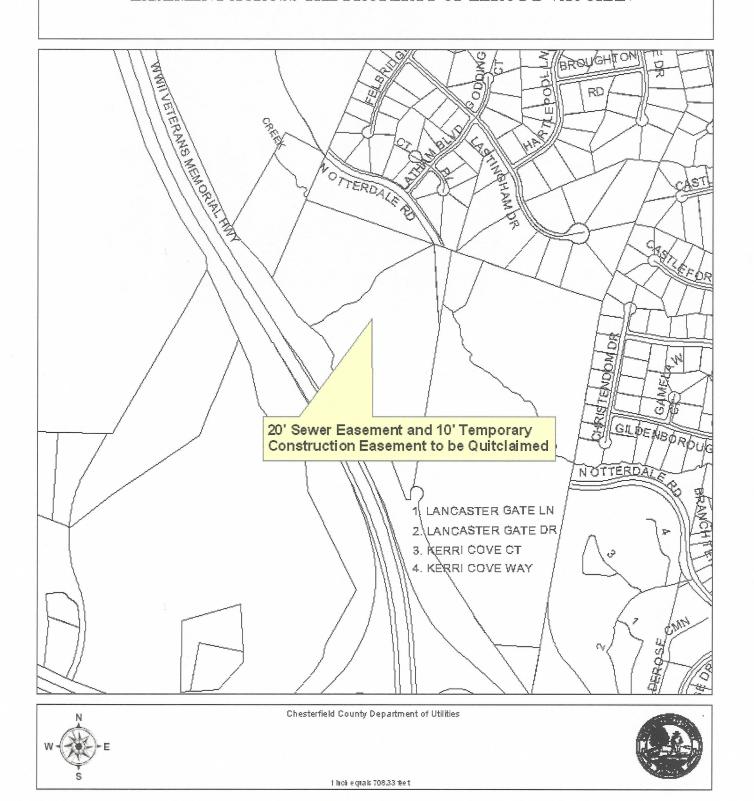


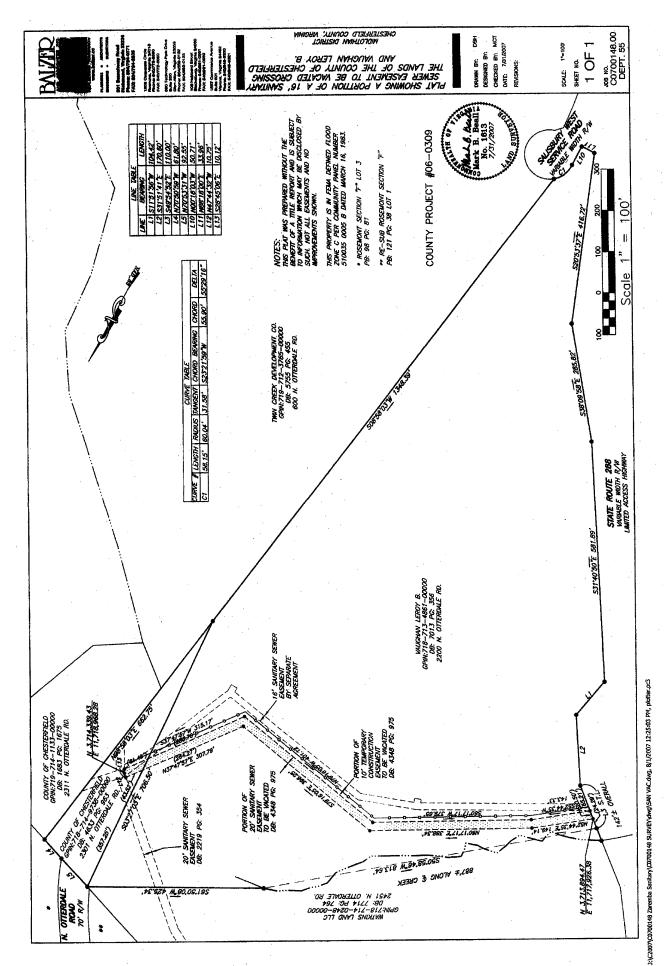




Meeting Date:	August 22, 2007	It	tem Number: 8	3.C.16.a.
Subject:				
-	itclaim a Portion struction Easemen	-		
County Administ	rator's Comments:			
County Administ	rator:			
Board Action Red	()			
Administrator	e Chairman of to execute a qui a 10' temporary nan.	tclaim deed to va	acate a portic	n of a 20' sewer
Summary of In	formation:			
easement and	han has requeste a 10' temporary attached plat. S	construction eas	ement across	his property as
District: Midlo	thian			
Preparer: <u>Joh</u>	n W. Harmon	Title <u>:</u>	Right of Way Mar	<u>iager</u>
Attachments:	Yes	No		# 000143

REQUEST TO QUITCLAIM A PORTION OF A 20' SEWER EASEMENT AND A 10' TEMPORARY CONSTRUCTION EASEMENT ACROSS THE PROPERTY OF LEROY B VAUGHAN



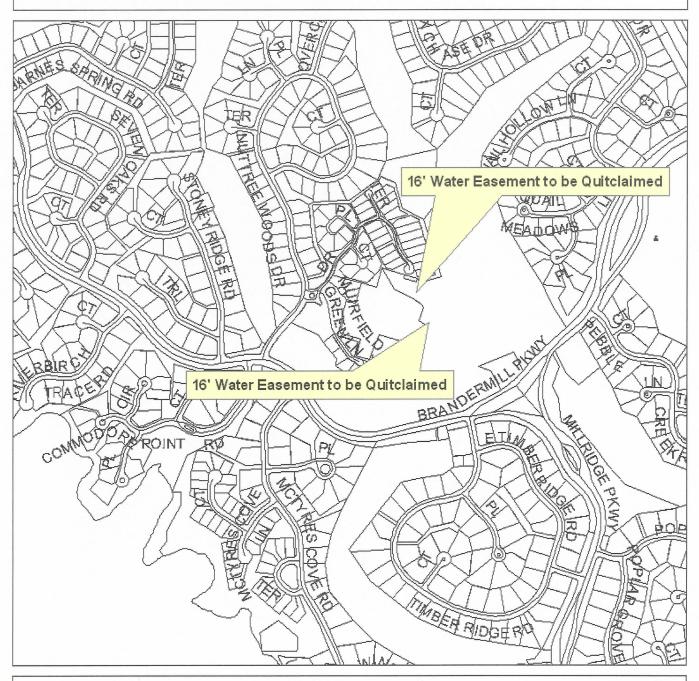




Meeting Date: August 22, 2007	Item Number: 8.0	C.16.b.
Subject:		
Request to Quitclaim Two Sixteen-Foot Wa Commonwealth Golf Properties L.L.C.	ter Easements Across	the Property of
County Administrator's Comments:		
County Administrator:		
Board Action Requested:		
Authorize the Chairman of the Board Administrator to execute a quitclaim de across the property of Commonwealth Golf	ed to vacate 2 16' w	_
Summary of Information:		
Commonwealth Golf Properties L.L.C. has water easements across its property as shreviewed the request and approval is recommonwealth.	nown on the attached p	
District: Clover Hill		
Preparer:John W. Harmon	Title: Right of Way Mana	<u>ger</u>
Attachments: Yes No		[#] 090 146

VICINITY SKETCH

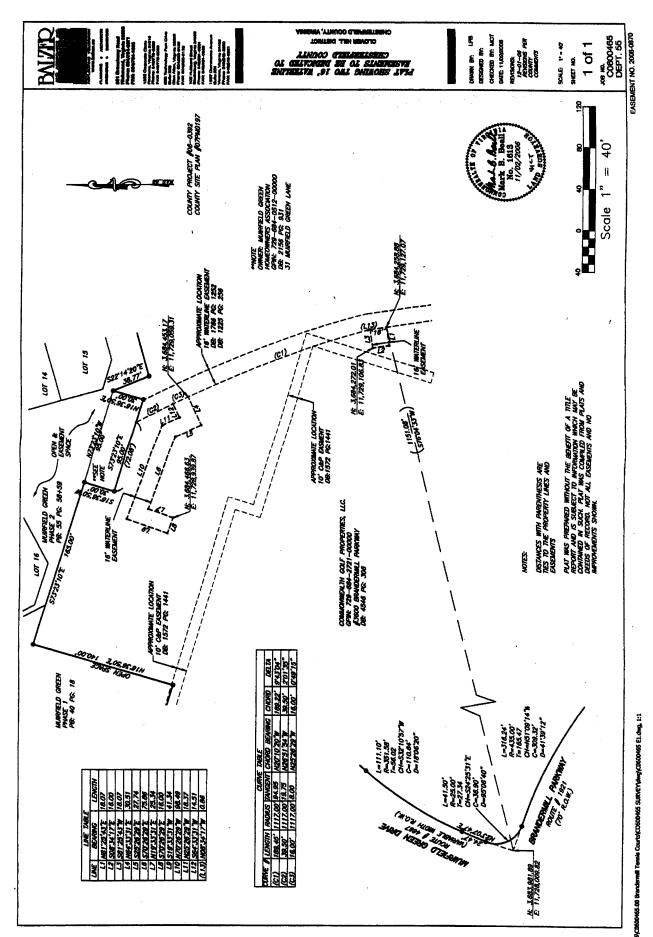
REQUEST TO QUITCLAIM 2 16' WATER EASEMENTS ACROSS THE PROPERTY OF COMMONWEALTH GOLF PROPERTIES LLC





Chesterfield County Department of Utilities







Meeting D	Pate: August 22, 2007	Item Number: 8.	.C.17.
Subject:	Award of Construction Contract II Modifications Proctors Creel		
County Adn	ninistrator's Comments:		
County Adn			ad to award the
construct	on Requested: The Board of Superion contract to Mid Eastern 00 and authorize the County Adm.	Builders, Inc. in	the amount of
thickener tank and Proctors electrica	of Information: This project of building, a new digester build various modifications and democreek Wastewater Treatment plant al work. These processes are uto thin the treatment plant prior	ding, two new diges olition of other bu , with various civil ilized to properly t	ters, a holding uildings at the , mechanical and treat wastewater
lowest bi	nas evaluated the bids and recom	000, was submitted ng consultant, R.	by Mid Eastern Stuart Royer &
Funds are	e available in the current CIP.		
District:	3ermuda		
Preparer:	George B. Hayes T	tle: Assistant Director	
Attachme	ents: Yes No		[#] 000149



Page 2 of 2

Meeting Date: August 22, 2007

Budget and Management Comments:

This item requests that the Board award a construction contract to Mid Eastern Builders, Inc. in the amount of \$28,330,000 and authorize the County Administrator to execute the necessary documents for the Proctors Creek upgrades project. The recommended bid amount is approximately \$4.8 million (20.5%) higher than what was originally budgeted for this phase of the project. While the recommended contract amount exceeds estimates, staff recommends proceeding using funds that are currently appropriated and planned for subsequent phases of this project.

The increase in costs can be attributed to additional work identified during engineering, various economic factors such as the cost of construction materials, and the effects on the construction market of a statewide requirement to meet more stringent Chesapeake Bay Act water quality standards by January 2011. It is estimated by the state Department of Environmental Quality that economic factors could increase the cost of wastewater treatment plant projects by as much as 20 percent statewide.

Staff is developing measures, including expanded marketing initiatives, to help minimize pricing variances on future phases of the Proctors Creek upgrade project. Staff will make any necessary recommendations to meet subsequent funding requirements as additional pricing information becomes available.

Preparer: Allan M. Carmody Title: <u>Director, Budget and Management</u>



Meeting Date:	August 22, 2007	Item Number: 8.	C.18.
Subject:			
		for Construction of the Route : idening Project Noise Wall	360 (Swift Creek
County Administr	ator's Comments:		
County Administr	ator:		
Administrator	to execute a c f a noise wall on	coard is requested to author change order, up to \$1.5 mi the Route 360 (Swift Creek to	llion, for the
Summary of Inf	ormation:		
Creek to Winte	erpock Road) Comb	d the contract award for the Poined Widening project. The reextremely well and is nearing	oad construction
required a noi noise wall was wall at the ti the wall and o	ise wall to be conot included in the contraction of the contraction details been completed.	ion, as part of their approval postructed at the Thornridge so the project contract. The estimet award was \$486,000. Constructs were not available at the Our contractor's price to const	subdivision. The mated cost of the uction plans for time. Detailed
Preparer: R.J. N	McCracken	Title: Director of Transporta	ation
	Agen666		
Attachments:	Yes	No	# 000151

Page 2 of 3

Summary of Information: (continued)

Staff believes the initial estimated cost for the wall did not accurately reflect the true price of wall construction and did not cover all the required work. In addition, specific site conditions (rock, restricted work area, proximity to power lines, grading, etc.) add to the complexity of the wall construction. Staff believes bidding the wall as a stand-alone project will not result in a significant reduction in the price and would delay construction of the wall. Therefore, staff therefore recommends the contractor's price be accepted, and the wall be constructed as a change order to the existing Route 360 contract. FHWA and VDOT will also have to approve the noise wall price.

VDOT's obligation to reimburse the county under the project agreement, as previously discussed with the Board, is subject to state appropriation of the funds and approval by the Commonwealth Transportation Board. VDOT has thus far reimbursed the county for our expenses in accordance with the agreement. Staff believes VDOT will continue the reimbursements.

Sufficient funds remain in the project contingency to cover the increase in the noise wall cost. No additional appropriations will be required.

Recommendation:

Staff recommends the Board authorize the County Administrator, subject to VDOT and FHWA concurrence, to execute a noise wall change order up to \$1.5 million.

District: Clover Hill and Matoaca

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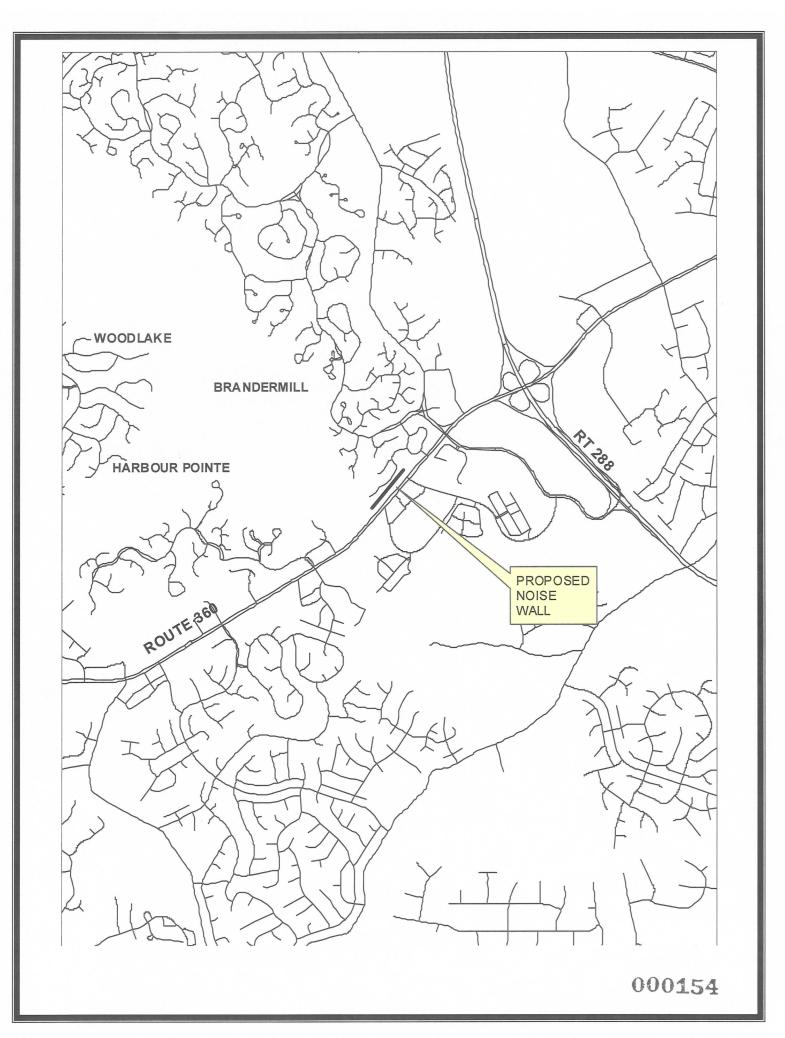


Meeting Date: August 22, 2007

Budget and Management Comments:

This item requests that the Board approve a change order in the amount of \$1.5 million for completion of a noise wall on the Route 360 road project. Sufficient funding has already been appropriated for the Route 360 project.

Preparer: ___Allan M. Carmody Title: Director, Budget and Management





Meeting Date: August 22, 2007	item Number.	8.C.19.a.
Subject:		
Initiation of a Conditional Use for Matoaca Controlled Variable Message Electronic Sign	High School	for a Computer
County Administrator's Comments:		
County Administrator: Board Action Requested:		
Initiate a Conditional Use for Tax ID 783-62 controlled variable message electronic s requirements; and appoint Bill Carlson, Ath Recreation, as the Board's Agent.	ign; waive t	the disclosure
Summary of Information:		
The Honorable Mrs. Humphrey has requested tha application for Matoaca High School to allow a message electronic sign.		
Preparer: Kirkland A. Turner Title:	Director of Planr	ning
Attachments: Yes No		000155

CHESTERFIELD COUNTY BOARD OF SUPERVISORS Page 1 of 1 **AGENDA**

Meeting Date:	August 22, 2007	Item Number: 8	.C.19.b.
Subject:			
		lanned Development Applicat lled Variable Message Elec	
County Administr	ator's Comments:		
County Administr	ator:		
Board Action Reg	uested:		
controlled va	riable message el and appoint Kirkland	ax ID 714-672-8571 to perm ectronic sign; waive th A. Turner, Director of Pla	ne disclosure
Summary of Inf	ormation:		
	r Cosby High School	quested that the Board inito to allow a computer contro	
Preparer: <u>Kirk</u>	land A. Turner	Title: <u>Director of Plann</u> i	<u>ing</u>
Attachments:	Yes	No	000156

Meeting Date: August 22, 2007

CHESTERFIELD COUNTY BOARD OF SUPERVISORS AGENDA

Page 1 of 2

Item Number: 8.C.20.

<u>Subject:</u>	
Acceptance of a Department of Criminal Justice Services (DCJ Appropriate \$100,000 for the Operation Expenses of the Commun Services Dual Treatment Track	
County Administrator's Comments:	
County Administrator:	<u></u>
Board Action Requested: The Board of Supervisors is requested to accept and appropriate the Department of Criminal Justice Services (DCJS) for the or Community Corrections Services Dual Treatment Track.	
Summary of Information:	
The Dual Treatment Track (DTT) grant provides \$100,000 and total cost to Chesterfield County in FY08 to operate the DTT is \$228,100. The grant will allow for the continued operation of the Continued operation of the General District, Circuit Domestic Relations Courts an alternative for adult persons discocurring disorders. The CCS Department and Chesterfield Count provide services jointly. The grant provides partial funding Mental Health Clinicians assigned to the Dual Treatment Trace of the DTT operational costs for fiscal year 2008. A request made to the General Assembly for full funding in FY09.	from \$338,100 to ons of the Dual and Juvenile & agnosed with co- ty Mental Health for one of two k and a portion
Preparer: Rebecca T. Dickson Title: Deputy County Admi	<u>nistrator</u>
Attachments: Yes No	#
	000157





Meeting Date: August 22, 2007

Budget and Management Comments:

This item requests that the Board authorize the acceptance and appropriation of state grant funds from the Department of Criminal Justice Services for the Dual Treatment Track program in the amount of \$100,000. The grant provides the partial funding of costs associated with the treatment of adult persons diagnosed with co-occurring disorders. Funds reserved at June 30, 2007 in the amount of \$175,000, contributions from Community Corrections Services of \$14,119 and the Mental Health Department of \$65,201 complete the funding. The total cost of the Dual Treatment Track program is \$354,320.

Preparer:	Allan M. Carmody	Title: Director, Budget and Management
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CHESTERFIELD COUNTY BOARD OF SUPERVISORS Page 1 of 2 **AGENDA**

000159

Meeting Date: August 22, 2007	Item	Number: 8.C.21.
Subject:		
Transfer a total of \$2,400 in M Police and Parks and Recreation the Costs of the Midlothian Vill	Departments and to	
County Administrator's Comments: County Administrator:		
Board Action Requested:		
The Board of Supervisors is re Midlothian District Improvement Departments and to the School provide services for the Midloth	Funds to the Police Board to rent sp	e and Parks and Recreation ace and equipment and to
Summary of Information:		
Supervisor Sowder has requested District Improvement Funds to provide the County to supply equipment; possible school space for the Midlothian The Festival is a long-standing pursuant to a written agreement and Parks and Recreation Department of the Festival costs incurred by these departments incurred by the properties incurred by these departments incurred by the properties in the prop	pay a portion of lice and parks and lice and parks and willage Day Fest g event that is cand is open to the ments and the School and the requested ents to rent equipone the departments presented to the Police in the police of the parks and pa	the costs incurred by the recreation services; and ival on October 20, 2007. o-sponsored by the County general public. The Police I Board have traditionally funds will help defray the ment and space and provide viously planned to provide. Lice Department to provide
Preparer: Allan Carmody		dget and Management 125:72841.1
Attachments: Yes	No	0004

Page 2 of 2

rent tables, chairs, a stage platform and other equipment, and to publicize the event as well as cover the expense of a U-Haul trailer to transport the items to the festival site. \$425 will be transferred to the School Board for the cost of renting Midlothian Middle School and providing custodial services. This request originally came from the Midlothian Junior Women's Club. The County is legally prohibited from donating money to this organization. The Board is authorized, however, to defray the cost incurred by County departments and the School Board for civic events which the County has traditionally sponsored pursuant to a co-sponsorship agreement and which are open to the general public and serve a community-wide audience.

For information regarding available balances in the District Improvement Fund accounts, please reference the District Improvement Fund Report.

DISTRICT IMPROVEMENT FUNDS APPLICATION

This application must be completed and signed before the County can consider a request for funding with District Improvement Funds. Completing and signing this form does not mean that you will receive funding or that the County can legally consider your request. Virginia law places substantial restrictions on the authority of the County to give public funds, such as District Improvement Funds, to private persons or organizations and these restrictions may preclude the County's Board of Supervisors from even considering your request.

1. What is the name of the applicant (person or organization) making this funding request?

Midlothian Junior Woman's Club (MJWC)

If an organization is the applicant, what is the nature and purpose of the organization? (Also attach organization's most recent articles of incorporation and/or bylaws to application.)

MJWC is a non-profit civic organization that is composed of women dedicated to service of the community through various community projects.

3. What is the amount of funding you are seeking?

\$2400-please see attached breakdown

4. Describe in detail the funding request and how the money, if approved, will be spent.

The funding will be used to defray some of the costs of a stage, table and chair rentals, rental of the Midlothian Middle School and fee for security for our annual Fall Festival in October 2007 - Oct. 20

5. Is any County Department involved in the project, event or program for which you are seeking funds?

Yes, Department of Parks and Recreation, Chesterfield County Police Department and the Midlothian Middle School 6. If this request for funding will not fully fund your activity or program, what other individuals or organizations will provide the remainder of the funding?

Community Sponsors/Patrons and the Midlothian Junior Woman's Club

7.	If applicant is an organization, ans	wer the fo	ollowing:		
	Is the organization a corporation?	Yes		No	×
	Is the organization non-profit?	Yes	\boxtimes	No	
	Is the organization tax-exempt?	Yes	\boxtimes	No	
8.	What is the address of the applica making this funding request?	nt			
	1218 Ry	/anwood (Court, Mid	llothian, V	A 23113
9.	What is the telephone number; far e-mail address of the applicant?	c number,			
	804-34	7-8860 CI	OME, 804 ELL, 804-! Dverizon.r	560-2290	8 OFFICE, FAX,
	o ti c	n behalf one preside hairman/d	f an orgar nt, vice-pi irector or nization.	nization yo resident, vice-chair	
		<u>Maa</u> Signatu	ndy re	6an	rbaun
		nd Vice Pr o itle (if sig		ehalf of an	organization)
		flandy Gar Printed Nar			
	J	uly 27, 2	007		000162

Date

MJWC Summary of Festival 2007 Expenses

Expense Item		Cost
Rental of Midlothian Middle Fee for off Duty Police Officer Stage from Parks and Recreation Tables and Chairs from Parks and Rec Dumpster Rental	\$ \$ \$ \$ \$	425.00 300.00 900.00 400.00 375.00
Total Hofront Festival Costs	\$	2,400.00



Meeting Date: August 22,	2007 Item Number: 10).A.
Subject: Developer Water	er and Sewer Contracts	
County Administrator's Comm	nents:	
County Administrator:		_
	The Board of Supervisors has author e water and/or sewer contracts betwee no County funds involved.	-
The report is submitted	to Board members as information.	
Summary of Information:		
The following water an Administrator:	nd sewer contracts were executed	by the County
1. Contract Number: Project Name:		
Developer: Contractor:	Tascon Ironbridge, LLC Buchannan and Rice Contractors, Inc	
Contract Amount:	Water Improvements - Wastewater Improvements -	\$411,559.33 \$365,902.39
District:	Bermuda	
Preparer: William O. Wrig	ht Title: <u>Assistant Director o</u>	<u>f Utilities</u>
Attachments:	es No	000164

Agenda Item August 22, 2007 Page 2

2. Contract Number: 03-0289

Project Name: Mt. Pisgah United Methodist Church

Developer: Trustees, Mt. Pisgah United Methodist Church

Contractor: J. R. Caskey Incorporated

Contract Amount: Water Improvements - \$29,550.00

Wastewater Improvements - \$2,619.00

District: Midlothian

3. Contract Number: 05-0097

Project Name: Rossington, Section 2

Developer: Centex Homes

Contractor: Castle Equipment Corporation

Contract Amount: Water Improvements - \$151,804.00

Wastewater Improvements - \$276,323.00

District: Bermuda

4. Contract Number: 05-0403

Project Name: Holly Haven and Holly Haven Section 2

Developer: D. K. Walters Builders, Incorporated

Contractor: Perkinson Construction Company

Contract Amount: Water Improvements - \$14,543.00

Wastewater Improvements - \$7,825.00

District: Bermuda

5. Contract Number: 06-0096

Project Name: Chester United Methodist Church

Additions and Renovations

Developer: Chester United Methodist Church
Contractor: R & D Construction and Excavation

Contract Amount: Water Improvements - \$14,316.00

District: Bermuda 000165

Agenda Item August 22, 2007 Page 3

6. Contract Number: 06-0312

Project Name: Cambria Cove, Section 1

Developer: Centex Homes

Contractor: Castle Equipment Corporation

Contract Amount: Water Improvements - \$116,528.10

Wastewater Improvements - \$335,906.67

District: Matoaca

7. Contract Number: 06-0409

Project Name: Colony Park

Developer: B. B. Hunt LLC

Contractor: Rhyne Contractors, Inc.

Contract Amount: Water Improvements - \$31,591.00

Wastewater Improvements - \$23,232.30

District: Matoaca

8. Contract Number: 07-0010

Project Name: Woodmont, Section B, Block H, Lots 7 & 8

Water and Sewer Extension

Developer: Jeffrey T. & Emily E. M. Wright Contractor: Couch Construction Company, Inc.

Contract Amount: Water Improvements - \$7,900.00

Wastewater Improvements - \$35,900.00

District: Midlothian



weeting Date: August 22, 2007	item Number: 1	.U.B.
Subject:		
Status of General Fund Balance, Reserve for District Improvement Fund, and Lease Purchases	r Future Cap	ital Projects,
County Administrator's Comments:		
County Administrator:		
Board Action Requested:		
Summary of Information:		
Preparer: James J. L. Stegmaier Title: Cou	unty Administrator	
Attachments: Yes No		# 000167

CHESTERFIELD COUNTY UNDESIGNATED GENERAL FUND BALANCE July 25, 2007

BOARD

MEETING

<u>DATE</u> <u>DESCRIPTION</u> <u>AMOUNT</u> <u>BALANCE</u>

07/01/07 FY2008 Beginning Budgeted Balance \$50,945,000 *

^{*}Pending outcome of FY2007 Audit Results

CHESTERFIELD COUNTY RESERVE FOR FUTURE CAPITAL PROJECTS July 25, 2007

Board Meeting <u>Date</u>	<u>Description</u>	<u>Amount</u>	Balance
6/30/2007	FY07 Ending Balance		1,097,798
FOR FISCAL	YEAR 2008 BEGINNING JULY 1, 2007		
4/11/2007	FY08 Budgeted Addition	15,521,300	16,619,098
4/11/2007	FY08 Capital Projects	(14,889,300)	1,729,798

^{*}Pending outcome of FY2007 Audit Results

DISTRICT IMPROVEMENT FUNDS August 22, 2007

<u>District</u>	Prior Years Carry Over	FY2008 Appropriation	Funds Used Year to Date	Items on 8/22 Agenda	Items on Balance Pending Agenda Board Approval
Bermuda	\$59,140	\$48,500	\$9,140		898,500
Clover Hill	81,839	48,500	0		130,339
Dale	80,152	48,500	0	449	128,203
Matoaca	55,842	48,500	0		104,342
Midlothian	51,927	48,500	2,400	4,086	93,941
County Wide	•	13,500	0		13,500

SCHEDULE OF CAPITALIZED LEASE PURCHASES APPROVED AND EXECUTED

APPROVED AND EXECUTED					
Date Began 04/99	<u>Description</u> Public Facility Lease – Juvenile Courts Project	Original <u>Amount</u> \$16,100,000	Date <u>Ends</u> 11/19	Outstanding Balance 7/31/07 \$10,465,000	
01/01	Certificates of Participation - Building Construction, Expansion and Renovation; Acquisition/Installation of Systems	13,725,000	11/21	9,125,000	
03/03	Certificates of Participation – Building Construction, Expansion and Renovation	6,100,000	11/23	5,140,000	
03/04	Certificates of Participation – Building Construction, Expansion and Renovation; Acquisition/Installation of Systems	21,970,000	11/24	19,690,000	
10/04	Cloverleaf Mall Redevelopment Project	9,225,000	10/08	9,225,000	
11/04	School Archival/Retrieval System Lease	21,639	01/08	4,362	
12/04	Energy Improvements at County Facilities	1,519,567	12/17	1,383,317	
12/04	Energy Improvements at School Facilities	427,633	12/10	306,953	
05/05	Certificates of Participation – Building Acquisition, Construction, Installation, Furnishing and Equipping; Acquisition/Installation of Systems Certificates of Participation – Building	14,495,000	11/24	13,465,000	
	Acquisition, Construction, Installation, Furnishing and Equipping; Acquisition/Installation of Systems	11,960,000	11/24	11,155,000	
	TOTAL APPROVED AND EXECUTED	<u>\$95,543,839</u>		<u>\$79,959,632</u>	
	PENDING EXECUTION Description s of Participation – Building Expansion/Renovation, t Acquisition			Approved <u>Amount</u> \$22,600,000	



CHESTERFIELD COUNTY BOARD OF SUPERVISORS Page 1 of 1 **AGENDA**

Meeting Date:	August 22, 2007		Item Number:	14.A.
Subject:				
	ognizing Mr. Joh munity College E		His Service as	a Member of the
County Administr	ator's Comments:			
County Administr	ator:			
Board Action Req	uested:			
Adoption of at	tached resolutio	on.		
Summary of Inf	ormation:			
	_			ognizing Mr. John ommunity College
Preparer: Lisa	Elko	Title: <u>Clerk</u>	to the Board	
Attachments:	Yes	No		# 000172

RECOGNIZING MR. JOHN GROHUSKY FOR HIS SERVICE AS A MEMBER OF THE JOHN TYLER COMMUNITY COLLEGE BOARD

WHEREAS, Mr. John Grohusky has served on the John Tyler Community College Board from March 1998 to June 30, 2007; and

WHEREAS, Mr. Grohusky served as Vice Chairman of the Board for two years and Chairman of the Board for two years; and

WHEREAS, Mr. Grohusky regularly represented the College at the General Assembly, at statewide events, and at Virginia Community College System events; and

WHEREAS, Mr. Grohusky provided wise counsel to the College's leadership from a broad base of business and manufacturing experiences; and

WHEREAS, Mr. Grohusky regularly interacted with students and faculty of the institution in order to be better immersed in the issues of the day and the life of the College; and

WHEREAS, Mr. Grohusky led the Board in assisting the College in the areas of facilities management, curriculum development, and student services; and

WHEREAS, Mr. Grohusky was an untiring and constant advocate for John Tyler Community College and Virginia's community colleges generally.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors, this $22^{\rm nd}$ day of August 2007, publicly recognizes Mr. John Grohusky and expresses appreciation for his service to the Board of John Tyler Community College, and to the citizens of the Commonwealth of Virginia.

AND, BE IT FURTHER RESOLVED that a copy of this resolution be presented to Mr. Grohusky and that this resolution be permanently recorded among the papers of this Board of Supervisors of Chesterfield County, Virginia.



Meeting Date:	August 22, 2007	Iter	n Number: 14.B.
Subject:			
Team for Their	Outstanding Ac	chmond Kickers Youth U12 complishments, During th sentation of Chesterfiel	e 2006-2007 Seasons
County Administra	ator's Comments:		
County Administra	\bigcup		
commend and re-	cognize the Rich	er has requested that the hmond Kickers Youth U12 G ts and representation of	Firls Elite Soccer Team
Summary of Inf	ormation:		
Youth U12 Girls record and tournament and Soccer Team were represented th	s Elite Soccer T urnament champion the Kickers Cl re the champions	s in the VYSA State Cup C of Virginia in the Unite	ar season with a 10-0-4 Potomac Memorial Day 12 Kickers Girls Elite Championships, and they
Preparer: Michael S	S. Golden	Title: <u>Director-Parks a</u>	nd Recreation
Attachments:	Yes	No	# 000174

RECOGNIZING RICHMOND KICKERS U12 GIRLS ELITE SOCCER TEAM AND STAFF FOR THEIR OUTSTANDING REPRESENTATION OF CHESTERFIELD COUNTY

WHEREAS, participation in co-sponsored sports has long been an integral part of Chesterfield County's educational, physical and emotional development for athletes; and

WHEREAS, Mr. Sean Kastetter, Head Coach of the Richmond Kickers Youth Soccer Club U12 Girls Elite Team, has won his first State Cup Title in Virginia Youth Soccer; and

WHEREAS, under Mr. Kastetter and his staff's direction, the 2006/2007 Richmond Kickers Youth Soccer Club U12 Girls Elite Team finished their regular season with a 10-0-4 record and the tournament season with championship victories in the Potomac Memorial Day Tournament and the Kickers Club Invitational; and

WHEREAS, the U12 Kickers Girls Elite Soccer Team was Fall 2006 season champion in the Virginia Club Champions League, and runner up in the Spring 2007 season; and

WHEREAS, the U12 Kickers Girls Elite Soccer Team competed in the VYSA State Cup Championship and were the champions, outscoring opponents 11 goals to 5, with a 3 to 2 win over VA Rush Academy White in the State Championship match; and

WHEREAS, the U12 Kickers Girls Elite Soccer Team represented the Commonwealth of Virginia in the United States Youth Soccer Region 1 in Portland, Maine; and

WHEREAS, the team members included Blaire Amis, Allison Bortell, Tessa Broadwater, Miranda Carlson, Gina D'Orazio, Blayne Fink, Jayden Metzger, Elizabeth Patrick, Alexandra Pinkleton, Rachael Seiler, Chloe Starnes, and Elena Wirz.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors, this 22nd day of August 2007, publicly recognizes the Richmond Kickers U12 Girls Elite Soccer Team and staff for their outstanding representation of Chesterfield County.

AND, BE IT FURTHER RESOLVED that the Board of Supervisors, on behalf of the citizens of Chesterfield County, does hereby commend the Richmond Kickers U12 Girls Elite Soccer Team and staff for their Commitment to Excellence and Sportsmanship, and hereby express their best wishes for continued success.



Meeting Date: August 22, 2007

CHESTERFIELD COUNTY BOARD OF SUPERVISORS Page 1 of 1 **AGENDA**

Item Number: 14.C.

Subject:
Resolution Recognizing Mr. John Caleb Dodgen, Troop 800, sponsored by Bethel Baptist Church; Mr. Matthew Christopher Lennon and Mr. Christopher Lee Pherson, both of Troop 806, sponsored by Woodlake United Methodist Church; and Mr. Michael James McCabe, Troop 880, sponsored by Beulah United Methodist Church, Upon Attaining Rank of Eagle Scout
County Administrator's Comments:
County Administrator: Board Action Requested: Adoption of the attached resolution.
Summary of Information:
Staff has received requests for the Board to adopt resolutions recognizing Mr. John Caleb Dodgen, Troop 800, Mr. Matthew Christopher Lennon and Mr. Christopher Lee Pherson, both of Troop 806, and Mr. Michael James McCabe, Troop 880, upon attaining the rank of Eagle Scout. All will be present at the meeting, accompanied by members of their families, to accept the resolutions.
Preparer: Lisa Elko Title: Clerk to the Board
Attachments: Yes No # 000176

WHEREAS, the Boy Scouts of America was incorporated by Mr. William D. Boyce on February 8, 1910, and was chartered by Congress in 1916; and

WHEREAS, the Boy Scouts of America was founded to build character, provide citizenship training and promote physical fitness; and

WHEREAS, after earning at least twenty-one merit badges in a wide variety of skills including leadership, service and outdoor life, serving in a leadership position in a troop, carrying out a service project beneficial to their community, being active in the troop, demonstrating Scout spirit, and living up to the Scout Oath and Law

Mr. John Caleb Dodgen, Troop 800, sponsored by Bethel Baptist Church; Mr. Matthew Christopher Lennon and Mr. Christopher Lee Pherson, both of Troop 806, sponsored by Woodlake United Methodist Church; and Mr. Michael James McCabe, Troop 880, sponsored by Beulah United Methodist Church have accomplished those high standards of commitment and have reached the long-sought goal of Eagle Scout which is received by only four percent of those individuals entering the Scouting movement; and

WHEREAS, growing through their experiences in Scouting, learning the lessons of responsible citizenship, and endeavoring to prepare themselves for roles as leaders in society, Caleb, Matthew, Christopher and Michael have distinguished themselves as members of a new generation of prepared young citizens of whom we can all be very proud.

NOW, THEREFORE, BE IT RESOLVED that the Chesterfield County Board of Supervisors, this 22^{nd} day of August 2007, hereby extends its congratulations to Mr. John Caleb Dodgen, Mr. Matthew Christopher Lennon, Mr. Christopher Lee Pherson and Mr. Michael James McCabe, and acknowledges the good fortune of the county to have such outstanding young men as its citizens.



CHESTERFIELD COUNTY BOARD OF SUPERVISORS Page 1 of 2 **AGENDA**

Meeting Date:	August 22, 2007	Item Number:	16.A.
Subject:			
	g to Consider Ad Community Develo	doption of an Ordinance Copment Authority	reating the Lower
County Administr	ator's Comments:		
County Administr	ator:		
Board Action Req	()		
Authority. Add work associate	ditionally, staffed with the wide	sider adoption of an Ordin requests authorization to p ening of Woolridge Road a f the CDA road improvements	proceed with design cross Swift Creek
Summary of Inf	ormation:		
ordinance to contact that encompass submitted a pe	reate the Lower M es the proposed M etition requestir	public hearing to consider Magnolia Green Community Dev Magnolia Green development. Ing that the Board create a community area of the surrounding area.	relopment Authority The landowner has CDA to fund road
and the distri Green property that road imp available publ	ct covered by the see attached made provements can discribed for the second second constant of the second s	ne owner of the Lower Magnol ne CDA would include only to p of the District). The adv be constructed immediately or with bonds, and the bonds intained within the CDA.	the Lower Magnolia vantage of a CDA is y, in advance of
Preparer: Francis	M. Pitaro	Title: Acting Deputy Co	ounty Administrator
Attachments:	Yes	No	[#] 000178

Page 2 of 2

The petitioning landowner proposes to use the CDA to construct up to \$27.1 million in road improvements to Otterdale Road, Woolridge Road and Hull Street Road:

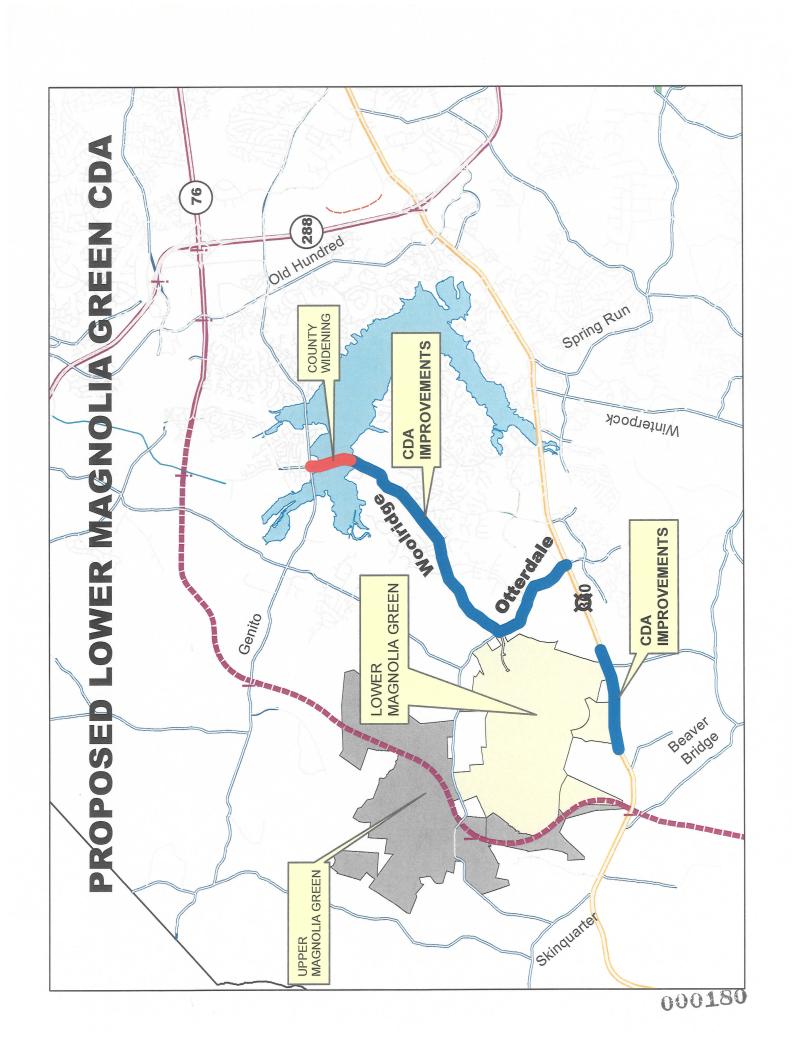
- Otterdale Road will be widened from two lanes to four lanes for a distance of approximately 1.18 miles, from its intersection with Hull Street Road to its intersection with Woolridge Road.
- **Woolridge Road** will be widened from two lanes to four lanes for a distance of approximately 2.73 miles, from its intersection with Otterdale Road up to, but not including, the western terminus of the causeway over Swift Creek Reservoir.
- **Hull Street Road** will be widened in an area that is generally adjacent to the Lower Magnolia Green development, and a traffic light installed, when needed.

County participation in the project will include:

- Acquiring the right of way and easements required for road improvements to Otterdale Road, Woolridge Road and Hull Street Road.
- Obtaining all permits required from VDOT.
- All wetlands permitting and mitigation requirements.
- The County intends to widen (concurrent with the CDA road improvements) Woolridge Road across Swift Creek Reservoir, from the terminus of the CDA road improvements to Genito Road.

The total cost to the County for the above tasks is estimated at \$12 million. Source of funds for the County's participation will include state reimbursement for Route 360 Project (2004 Bond Project), available cash proffers and the Utilities Capital Improvement Program. At this time, staff requests authorization to proceed with the design work associated with widening of Woolridge Road across Swift Creek Reservoir. Once design work is completed, a request will be brought before the Board to appropriate state reimbursement funds and to transfer Utilities CIP funds, in order to proceed with right of way acquisition and road construction.

In order to create the CDA, the Board must hold a public hearing and adopt an ordinance, a draft of which is attached. If the Board creates the CDA, the Board will then appoint five members to serve as the CDA's board of directors.



AN ORDINANCE TO AMEND THE CODE OF THE COUNTY OF CHESTERFIELD, 1997, AS AMENDED, BY ADDING CHAPTER 9, ARTICLE XVII, SECTIONS 9-240, 9-241, 9-242, 9-243, 9-244, 9-245, 9-246, 9-247, 9-248 AND 9-249 CREATING THE LOWER MAGNOLIA GREEN COMMUNITY DEVELOPMENT AUTHORITY

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

WHEREAS, the Board of Supervisors of Chesterfield County, Virginia (the "Board") has received a petition (the "Petition") from Magnolia Green Development, LLC (the "Landowner") for the creation of the Lower Magnolia Green Community Development Authority (the "CDA"), and the Landowner has represented that it owns all of the land within the proposed CDA district; and

WHEREAS, a public hearing has been held on August 22, 2007 by the Board on the enactment of this Ordinance and notice has been duly provided as set forth in Section 15.2-1427 of the Code of Virginia of 1950, as amended, and Sections 15.2-5104 and 15.2-5156 of the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2, Code of Virginia of 1950, as amended (the "Act"); and

WHEREAS, the Board proposes to create the CDA in order to provide the infrastructure improvements described in the Petition; and

WHEREAS, the creation of the CDA to assist in financing the infrastructure improvements described in the Petition in connection with the proposed development within the CDA district will benefit the citizens of Chesterfield County, Virginia (the "County") by providing needed infrastructure improvements to serve the land within the proposed CDA District and the surrounding area and by promoting increased employment opportunities, a strengthened economic base, increased tax revenues and additional residential, commercial, office and recreational opportunities, and will meet the increased demands placed upon the County as a result of development within the CDA district; and

WHEREAS, the Landowner has waived in writing its right to withdraw its signature from the Petition in accordance with Section 15.2-5156 of the Act.

(1) NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF SUPERVISORS OF CHESTERFIELD COUNTY, VIRGINIA, that Sections 9-240 through 9-249 of the Code of the County of Chesterfield, 1997, as amended, are hereby enacted as follows:

Section 9-240. <u>Creation of Authority.</u> The Lower Magnolia Green Community Development Authority (the "CDA") is hereby created as a political subdivision in accordance with the applicable provisions of the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2, Code of Virginia of 1950, as amended (the "Act"). The CDA shall have the powers set forth in the Act.

Section 9-241. <u>Boundaries of CDA.</u> The CDA boundaries shall initially include the property identified in Exhibit A, as attached to this Ordinance and presented to the Board upon

the creation of the CDA. The Board, at the request of the Landowner, in accordance with the Petition has excluded from the CDA district approximately 236.342 acres to be used for the construction of a golf course. In accordance with Section 15.2-5157 of the Act, a copy of this Ordinance shall be recorded in the land records of the Circuit Court of Chesterfield County for each tax map parcel in the CDA district and the CDA district shall be noted on the land records of the County. The Board, upon the request of the CDA or the Landowner or its successors in interest, may, by adopting an amendment to this Ordinance, release or exclude from the CDA district (i) at any time before the issuance of the CDA's bonds (the "Bonds"), areas designated by the CDA or the Landowner or its successors in interest, not to exceed a total of fifty-five (55) acres and (ii) at any time after the issuance of the Bonds, additional portions of the land within the CDA district as long as only de minimis portions of land not to exceed twenty-five (25) acres are released from the CDA district. Changes in the CDA boundaries pursuant to this Section shall not be made unless the CDA, the Landowner or its successors in interest has provided the County with evidence from an appropriate economic and financial consultant that such proposed reduction in the size of the CDA will have a minimal impact on the amount of the assessment necessary to amortize the anticipated Bond indebtedness.

Section 9-242. <u>Facilities and Services</u>. The CDA is created for the purpose of exercising the powers set forth in the Act, including financing, designing and constructing, certain infrastructure improvements, as more particularly described in Exhibit B attached hereto as a part hereof (the "Improvements") in connection with the development of a mixed-use project consisting of residential, commercial and office components, with recreation facilities and other amenities (the "Project"). The CDA shall have all the powers provided by the Act. The CDA shall not provide services which are provided by, or obligated to be provided by, any authority already in existence pursuant to the Act unless such authority provides the certification required by Section 15.2-5155 of the Act.

Section 9-243. Articles of Incorporation. Attached hereto as Exhibit C, and presented to the Board at the time of the adoption of this Ordinance, are the proposed Articles of Incorporation of the CDA. The County Administrator is authorized and directed to execute and file such Articles of Incorporation on behalf of the Board with the State Corporation Commission in substantially the form attached as Exhibit C, with such changes, including insubstantial changes to the boundary description of the CDA district described therein, as the County Administrator may approve. The County Administrator is authorized to approve such changes or corrections to the Articles of Incorporation prior to filing with the State Corporation Commission as do not change the purpose or function of the CDA as set forth in this Ordinance and in the Petition.

Section 9-244. <u>Capital Cost Estimates</u>. The Board hereby finds, in accordance with Section 15.2-5103(B) of the Act, that it is impracticable to include capital cost estimates, project proposals and project service rates, except as preliminarily summarized in the Petition.

Section 9-245. Membership of the CDA Board.

(a) The powers of the CDA shall be exercised by an authority board consisting of five members.

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- (b) All members of the CDA board shall be appointed by the Board by resolution in accordance with the provisions of Section 15.2-5113 of the Act.
- (c) The initial members of the CDA board shall be as set forth in the Articles of Incorporation for the terms set forth therein.
- (d) Each CDA board member shall receive such compensation from the CDA for his or her services as a CDA board member as may be authorized from time to time by resolution of the CDA board; *provided* that no CDA board member shall receive compensation in excess of \$300 per meeting attended unless authorized by resolution of the Board.

Section 9-246. Plan of Finance; Issuance of Bonds.

- (a) The improvements, services and operations to be undertaken by the CDA, as described herein and in the Petition, shall be funded from all or some of the following sources: (i) the Bonds to be issued by the CDA and (ii) special assessments to be levied pursuant to Section 15.2-5158A5 of the Act as more particularly described in the Petition and in a Special Assessment Agreement to be entered into by the CDA, the County and the Landowner or its successors in interest. Portions of the Lower Magnolia Green Property which are dedicated for public purposes or which are conveyed to an owners association as open space or common areas shall not be subject to assessment.
- (b) Upon the enactment of this Ordinance, the CDA will engage a professional administrator to prepare, with the assistance of the County, an assessment roll for all parcels of land within the CDA district. Such administrator will annually prepare a report which details the amount of the special assessment owed by the owner of each parcel of land within the CDA district.
- (c) The Bonds to be issued by the CDA may be tax-exempt or taxable and will not exceed a maximum aggregate principal amount of \$35,000,000. The Bonds shall be issued as soon as can practically be achieved (anticipated to be during the first quarter of 2008) and the proceeds from the sale of the Bonds will be used to pay the costs of the Improvements as described herein and in the Petition, the costs of issuing the Bonds and funding any required reserves, and paying capitalized interest on the Bonds for a period of up to thirty-six (36) months after the issuance of the Bonds. If there are any proceeds from the sale of the Bonds remaining after the payment of these costs, such excess proceeds shall be used to prepay a portion of the Bonds. If the proceeds from the sale of the Bonds are insufficient to pay these costs, the Landowner shall be solely responsible for paying any deficiency, subject to the limitation contained in Exhibit B to this Ordinance.
- (d) If the CDA encounters problems in issuing the Bonds due to adverse market conditions, the CDA shall give notice to the Petitioner and provide the Petitioner with an opportunity to assist in issuance of the Bonds.
- (e) Any bonds issued by the CDA or any other financing arrangements entered into by the CDA will be debt of the CDA, will not be a debt or other obligation of the County and will not constitute a pledge of the faith and credit of the County.

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Section 9-247. Recordation of Ordinance. In accordance with Section 15.2-5157 of the Act, the Board hereby directs the Clerk of the Circuit Court of the County to record an abstract of this Ordinance in its land records for each tax map parcel included in the CDA district and to note the existence of the CDA district on the land records of the County. Additionally, all subdivision plats on property located within the CDA shall contain a note referencing this ordinance.

Section 9-248. Compliance with Representation of Petition. The promises contained in the Petition having provided the inducement for the Board to create the CDA, compliance by the Landowner with those promises is essential to the orderly development of the land contained in the CDA. Accordingly, the failure of the Landowner or its successors in interest to perform any of the obligations or comply with any of the promises of the Petition, including the Exhibits to the Petition, shall constitute a violation of County ordinance and until bonds have been issued pursuant to Section 9-246 of this ordinance, no building permits, other than the first 1,379 residential permits, shall be issued for any property located in the CDA while any such violation of this ordinance continues. This provision shall not apply to permits for Phase I of the Conceptual Plan for Lower Magnolia Green dated February 1, 2007, prepared by Timmons Group, entitled "Lower Magnolia Green Conceptual Plan" (the "Conceptual Plan").

Section 9-249. <u>Conditions</u>. In satisfaction of the requirements of Paragraph 4 of the Petition, the Board, by its adoption of this Ordinance, confirms the matters set forth in <u>Exhibit D</u> attached hereto as a part hereof.

(2). This Ordinance shall take effect immediately.

The undersigned Clerk of the Board of Supervisors of Chesterfield County, Virginia, certifies that the foregoing constitutes a true, complete and correct copy of an Ordinance enacted at a regular meeting of the Board of Supervisors of the County of Chesterfield, Virginia, held on August 22, 2007.

Clerk, Board of Supervisors, Chesterfield County, Virginia

Exhibits:

- A Initial CDA District Boundaries
- B Description of the Improvements
- C Proposed Articles of Incorporation
- D Matters Confirmed by Adoption of Ordinance

Exhibit A

LEGAL DESCRIPTION

All those certain parcels of land lying and being in Chesterfield County, Virginia, and being known, numbered and designated as Parcel "A", 1664.283 +/- acres, Parcel "B", 122.976 acres and Parcel "C", 109.331 acres and as shown on that certain plat of survey entitled "ALTA/ACSM LAND TITLE SURVEY SHOWING 1896.590 +/- ACRES OF LAND LYING NORTH OF HULL STREET ROAD, U.S. ROUTE 360", dated March 10, 2006 by Timmons Group, which plat of survey is recorded in the Clerk's Office of the Circuit Court of Chesterfield County, Virginia in Plat Book 164, pages 87 through 94.

BEING the same property conveyed to Magnolia Green Development, LLC by deed from Salvatore J. Cangiano, dated March 16, 2006, recorded March 17, 2006 in Deed Book 7007, page 1800.

Tax Map Parcel Number	<u>Owner</u>	<u>Acreage</u>
703-667-2227	Magnolia Green Development, LLC	1664.283
703-667-2274	Magnolia Green Development, LLC	122.976
698-669-6309	Magnolia Green Development, LLC	109.331

Less and except a total of 236.342 acres designated as Parcels A through I on the Plat Showing
Nine Parcels of Land Lying North of Hull Street Road, dated June 20, 2007 prepared by
Timmons Group, which plat is recorded in the Clerk's Office of the Circuit Court of Chesterfield
County, Virginia in Plat Book, pages through

Exhibit B

DESCRIPTION OF THE IMPROVEMENTS

Primary Improvements

The realignment, reconstruction and widening, including required utility relocations, engineering design and related consulting services, of Otterdale Road from its intersection with Hull Street Road (Route 360) to its intersection with Woolridge Road, approximately 1.18 miles and Woolridge Road from its intersection with Otterdale Road up to the western terminus of, but not including, the existing causeway crossing the Swift Creek Reservoir, approximately 2.73 miles, as further shown on the map attached hereto as Exhibit C-1 (the These portions of Otterdale and Woolridge Roads will be "Primary Improvements"). expanded to four lanes as median divided roadways, with turn lanes, substantially in accordance with the design specifications shown on the plan dated March 22, 2007, prepared by Timmons Group, entitled "Woolridge Road Typical Sections, a copy of which is attached hereto as Exhibit C-2 as a part hereof (subject to modifications mutually agreed upon by the County, the Petitioner and the CDA), and shall include construction of required stormwater management basins. Landscaping shall include seeding of grass within the median and areas disturbed by construction activities and such other reasonable landscaping requested by the County up to \$350,000, if sufficient bond proceeds are available. No sidewalks or bike lanes shall be installed and utility work shall be limited to relocation of existing facilities. \$25,000,000 of the proceeds of the bonds will be allocated to the costs of the Primary Improvements. In addition, any remaining proceeds after payment of all other costs of the CDA, including construction of the Additional Improvements (as described herein) to the extent of the proceeds allocated thereto, shall be available for payment of the costs of the Primary Improvements.

The County will be responsible, at no cost to the Petitioner or the CDA, for (i) obtaining all rights of way and easements required for construction of the Primary Improvements, including required utility relocations and required stormwater management basins which may include off-site basins and basins designed to accept stormwater run-off from property in the watershed but not included in the CDA, (ii) obtaining all permits required from VDOT for the Primary Improvements, including providing any bonds required in connection with such permits, (iii) all wetlands permitting and mitigation requirements for the Primary Improvements from the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, including providing any required bonds, and (iv) payment or waiver of all County fees relating to the approval of all plans relating to the Primary Improvements. The Petitioner will be responsible for providing plans, satisfactory to the County, for the necessary right of way acquisition and construction both of the Primary Improvements and the Additional Improvements. The plans shall include, but not be limited to, utility relocation plans, storm water management basins, wetland delineation and mitigation and all other customary right of way acquisition and construction plan requirements. The plans will be provided to the County in a time frame acceptable to the County. The Petitioner shall also provide any re-design of the plans required by any governmental entity, including the County, provided that the County shall complete its review of each set of plans and make any comments regarding redesign within thirty (30) days after the plans are submitted to the County and shall use diligent efforts to cause VDOT to so the same.

The County shall have eighteen (18) months from the time it receives from the Petitioner plans sufficient for the acquisition of right of way for the Primary Improvements in a form that can be approved by VDOT (approximately 80% complete) in which to acquire the right of way and easements and obtain the permits (the "Right of Way Acquisition Period"). The 18-month period shall begin to run from the date when the County's Director of Transportation certifies that he has received plans which are in approvable form. If the County has not obtained the easements, rights of way and permits within the Right of Way Acquisition Period, the County will be responsible for payment of all costs relating to the Improvements in excess of that portion of the bonds allocated to the Primary Improvements or otherwise available to pay the costs of the Primary Improvements or, if the County is unable or unwilling to pay such costs, the Improvements will be modified, as directed by the County, as necessary to limit the costs to be paid by the CDA for the Improvements to such amounts.

Generally contemporaneous with the construction of the Primary Improvements and subject to appropriation by the Board of Supervisors, the County, at no cost to the Petitioner or the CDA, shall construct an extension of Woolridge Road from the terminus of the Primary Improvements across the Swift Creek Reservoir to Genito Road as a four lane roadway.

In order to maximize the benefits of the CDA to the County, the CDA will agree that any portion of the Primary Improvements which are to be constructed by others pursuant to zoning conditions or other commitments to the County may be excluded from the Primary Improvements to be constructed by the CDA at any time within nine (9) months after establishment of the CDA provided that the County agrees to cause the construction of such excluded Primary Improvements to be completed by the date projected for completion of the Primary Improvements by the CDA. In such event, the CDA shall pay to the County the net savings from elimination of such portion of the Primary Improvements which funds shall be used by the County for the extension of Woolridge Road across the Swift Creek Reservoir to Genito Road or for the costs incurred by the County relating to the rights of way and approvals to be obtained by the County for the Primary Improvements.

Additional Improvements

The CDA shall also construct additional improvements (the "Additional Improvements") consisting of (i) improvements to Woolridge Road from approximately station 10+00 to station 12+00 at the Woolridge Road entrance to Magnolia Green in accordance with the plans dated September 14, 2001, last revised July 31, 2006, prepared by Timmons Group, entitled "Woolridge Road Extension To Magnolia Green" (ii) improvements to Route 360 consisting of an additional lane of pavement along the west bound lanes of Route 360 and intersection improvements at the Chain Tree Parkway entrance to Magnolia Green from approximately station 10+40 to station 12+50, all in accordance with the plans dated December 3, 2003, last revised April 20, 2007, prepared by Timmons Group, entitled "Weeping Willow Drive & Chain Tree Parkway", (iii) improvements to Route 360 consisting of an additional lane of pavement along the west bound lanes of Route 360 in an area beginning at the western

terminus of the lane identified in (ii) and extending approximately one thousand feet west of Site Road D identified in the zoning of the Magnolia Green property, the exact location of such improvements to be mutually agreed upon by the County and landowner, (iv) improvements to Route 360 consisting of improvements at the intersection of Route 360 and Site Road D identified in the zoning of the Magnolia Green property (not to exceed 200 linear feet from the Route 360 right of way), the exact location of such improvements to be mutually agreed upon by the County and landowner, and (v) a traffic signal at the intersection of Hull Street Road and the Chain Tree Parkway entrance to Magnolia Green (across from Baldwin Creek Road) if warranted (estimated cost \$200,000). A maximum of \$2,100,000.00 of the proceeds of the bonds will be allocated to the costs of the Additional Improvements and the Landowner will be responsible for payment of any additional costs of such Additional Improvements.

General

All work to be performed by the CDA and the County is to be performed as soon as practical in accordance to a schedule to be agreed upon by the CDA and the County and diligently pursued to completion. The Petitioner acknowledges that construction of the traffic signal described as Additional Improvement number (iii) cannot take place until VDOT has approve placement of a traffic signal at that location based upon VDOT standards for the placement of traffic signalization.

Exhibit C PROPOSED ARTICLES OF INCORPORATION

ARTICLES OF INCORPORATION OF LOWER MAGNOLIA GREEN COMMUNITY DEVELOPMENT AUTHORITY

The undersigned, pursuant to Chapter 51, Title 15.2 of the Code of Virginia, adopts the following Articles of Incorporation for the Lower Magnolia Green Community Development Authority and states as follows:

Article I Name

The name of this Authority is LOWER MAGNOLIA GREEN COMMUNITY DEVELOPMENT AUTHORITY (the "Authority").

Article II Organization

Pursuant to an ordinance adopted by the Board of Supervisors of Chesterfield County, Virginia (the "Board of Supervisors") on August 22, 2007 (the "Ordinance"), the Authority shall be organized by the County of Chesterfield, Virginia (the "County") under the Virginia Water and Waste Authorities Act (Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended) (the "Act"), as a political subdivision governed by the laws of the Commonwealth of Virginia.

Article III Members

The affairs of the Authority shall be conducted by an authority board of five members ("CDA Board"). The initial CDA Board members are as set forth in Exhibit A attached hereto and incorporated by reference. All subsequent members shall be appointed by resolution of the Board of Supervisors. Each member shall serve a four year term, except the initial members who shall serve the terms of office set forth in Exhibit A. The election of officers of the Authority shall be as set forth in the By-Laws of the Authority. Qualifications and appointment of members of the CDA Board shall be consistent with the requirements of the Act.

The CDA Board shall have the powers and duties set forth in the Act and in these Articles of Incorporation and the By-Laws, to the extent that such powers and duties are not inconsistent with the Act.

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Article IV Principal Office

The Authority's principal office shall be 6700 Otterdale Road, Moseley, Virginia 23120. The Authority may conduct its business and maintain offices for such purposes at such other places within or without the County as may from time to time be deemed advisable by the CDA Board, and not in conflict with the requirements of the Act.

<u>Article V</u> Authority District

The land initially encompassed within the Authority is set forth in Exhibit B attached hereto (the "Initial Authority District") provided that the Board of Supervisors by amendment of the Ordinance, may release and exclude from the Authority district:

- (i) at any time before the issuance of the Authority's bonds:
 - land containing up to fifty-five (55) acres may be released and excluded at the request of the Petitioner, the Petitioner's successors in interest or the CDA Board; and
- (ii) at any time after the issuance of the Authority's bonds:
 - *de minimis* portions of the land containing not more than twenty-five (25) acres may be released and excluded at the request of the Board of Supervisors, the Petitioner, the Petitioner's successors in interest or the CDA Board.

Changes in the Initial Authority District shall not be made unless the Petitioner, the Petitioner's successors in interest or the Authority has provided the County with evidence satisfactory to the County from an appropriate economic and financial consultant that such proposed reduction in the size of the Initial Authority District will have a minimal impact on the amount of the assessment necessary to amortize the anticipated bond indebtedness.

Article VI Purposes and Powers

The Authority is organized for the purpose of exercising all powers granted by the Act, including financing, planning, acquiring and constructing the infrastructure improvements

generally described in the Petition to create the Authority attached hereto as Exhibit C. The Authority shall have all powers granted to a "community development authority" under the Act.

Article VII Not-for-Profit

The Authority shall not be organized or operated for pecuniary gain or profit. No part of the net earnings of the Authority shall inure to the benefit of, or be distributable to any member, director, officer, or any other private person, except that the Authority shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments in furtherance of the purposes set forth in Article VI.

Article VIII Amendment of Articles

These Articles of Incorporation may be amended at any time and from time to time by the Board of Supervisors as now or hereafter prescribed by the Act.

Article IX Registered Office and Registered Agent

The address of the initial registered office of the Authority is c/o Edward B. Kidd, Troutman Sanders LLP, 1001 Haxall Point, Richmond, Virginia 23219. The initial Registered Agent of the Authority is Edward B. Kidd, whose business address is identical to that of the initial registered office and who is a resident of Virginia and a member of the Virginia State Bar.

Article X Initial Members

The names and addresses of the initial members of the CDA Board are as set forth on Exhibit A.

Article XI Indemnification

- (a) For purposes of this Article XI the following definitions shall apply:
- (i) "expenses" include counsel fees, expert witness fees, and costs of investigation, litigation and appeal, as well as any amounts expended in asserting a claim for indemnification;
- (ii) "liability" means the obligation to pay a judgment, settlement, penalty, fine, or other such obligation;
- (iii) "legal entity" means a corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise; and
- (iv) "proceeding" means any threatened, pending or completed action, suit, proceeding or appeal whether civil, criminal, administrative or investigative and whether formal or informal.
- (b) In every instance in which the Virginia Nonstock Corporation Act, as it exists on the date hereof or may hereafter be amended, permits the limitation or elimination of liability of directors or officers of a corporation to the corporation, the members, directors and officers of the Authority shall not be liable to the Authority.
- The Authority shall indemnify any individual who is, was or is threatened to be (c) made a party to a proceeding (including a proceeding by or in the right of the Authority) because such individual is or was a member, director or officer of the Authority or because such individual is or was serving the Authority or any other legal entity in any capacity at the request of the Authority while a member, director or officer of the Authority, against all liabilities and reasonable expenses incurred in the proceeding except such liabilities and expenses as are incurred because of such individual's willful misconduct or knowing violation of the criminal law. Service as a member, director or officer of a legal entity controlled by the Authority shall be deemed service at the request of the Authority. The determination that indemnification under this paragraph (c) is permissible and the evaluation as to the reasonableness of expenses in a specific case shall be made, in the case of a member or director, as provided by law, and in the case of an officer, as provided in Section (d) of this Article; provided, however, that if a majority of the members of the Authority has changed after the date of the alleged conduct giving rise to a claim for indemnification, such determination and evaluation shall, at the option of the person claiming indemnification, be made by special legal counsel agreed upon by the CDA Board and such person. Unless a determination has been made that indemnification is not permissible, the Authority shall make advances and reimbursements for expenses incurred by a member, director or officer in a proceeding upon receipt of an undertaking from such member, director or officer to repay the same if it is ultimately determined that such member, director or officer is not Such undertaking shall be an unlimited, unsecured general entitled to indemnification. obligation of the member, director or officer and shall be accepted without reference to such member's, director's or officer's ability to make repayment. The termination of a proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent shall

not of itself create a presumption that a member, director or officer acted in such a manner as to make such member, director or officer ineligible for indemnification. The Authority is authorized to contract in advance to indemnify and make advances and reimbursements for expenses to any of its members, directors or officers to the same extent provided in this paragraph (c).

- (d) The Authority may, to a lesser extent or to the same extent that it is required to provide indemnification and make advances and reimbursements for expenses to its members, directors and officers pursuant to paragraph (c) of this Article, provide indemnification and make advances and reimbursements for expenses to its employees and agents, the members, directors, officers, employees and agents of its subsidiaries and predecessor entities, and any person serving any other legal entity in any capacity at the request of the Authority, and may contract in advance to do so. The determination that indemnification under this paragraph (d) is permissible, the authorization of such indemnification and the evaluation as to the reasonableness of expenses in a specific case shall be made as authorized from time to time by general or specific action of the CDA Board, which action may be taken before or after a claim for indemnification is made, or as otherwise provided by law. No person's rights under paragraph (c) of this Article shall be limited by the provisions of this paragraph (d).
- The rights of each person entitled to indemnification under this Article shall inure to the benefit of such person's heirs, executors and administrators. Special legal counsel selected to make determinations under this Article may be counsel for the Authority. Indemnification pursuant to this Article shall not be exclusive of any other right of indemnification to which any person may be entitled, including indemnification pursuant to a valid contract, indemnification by legal entities other than the Authority and indemnification under policies of insurance purchased and maintained by the Authority or others. No person, however, shall be entitled to indemnification by the Authority to the extent such person is indemnified by another, including an insurer. The Authority is authorized to purchase and maintain insurance against any liability it may have under this Article or to protect any of the persons named above against any liability arising from their service to the Authority or any other legal entity at the request of the Authority regardless of the Authority's power to indemnify against such liability. The provisions of this Article shall not be deemed to preclude the Authority from entering into contracts otherwise permitted by law with any individuals or legal entities, including those named above. If any provision of this Article or its application to any person or circumstance is held invalid by a court of competent jurisdiction, the invalidity shall not affect other provisions or applications of this Article, and to this end the provisions of this Article are severable.
- (f) No amendment, modification or repeal of this Article shall diminish the rights provided hereunder to any person arising from conduct or events occurring before the adoption of such amendment, modification or repeal.

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IN WITNESS WHEREOF, the undersigned incorporator has executed these Africles of
ncorporation as of the day of August, 2007, as duly authorized by Ordinance adopted by
he Board of Supervisors of Chesterfield County, Virginia on August 22, 2007.
By:
County Administrator, County of
Chesterfield, Virginia

Exhibit A

Names and Addresses of Initial Members

Term of Office

	Commences	Expires
Art Heinz President Heinz Insurance Inc. 9321 Waterfowl Flyway Chesterfield, Virginia 23838 (804) 216-1442 Dale Residence	August 22, 2007	June 30, 2011
Deborah Girvin Vice President of Human Resources Shamin Hotels 11300 Taylor Road Chesterfield, Virginia 23838 (804) 777-9000 x124 Matoaca District	August 22, 2007	June 30, 2011
Robert M. (Mac) Bullock Director of Operations Getloaded.com 14221 Chepstow Road Midlothian, Virginia 23113 (804) 521-1718 Midlothian District	August 22, 2007	June 30, 2011
Worth (Buddy) Whitfield IBM 3223 Regatta Point Court Midlothian, Virginia 23112 (804) 651-3521 Clover Hill District	August 22, 2007	June 30, 2011
Manuel Flores Brig. General U.S. Army (Retired) 2348 Coxendale Road Chester, Virginia 23831 (804) 748-6912 Bermuda District	August 22, 2007	June 30, 2011

Exhibit B

Description of Initial Authority District

All those certain parcels of land lying and being in Chesterfield County, Virginia, and being known, numbered and designated as Parcel "A ", 1664.283 +/- acres, Parcel "B", 122.976 acres and Parcel "C", 109.331 acres and as shown on that certain plat of survey entitled "ALTA/ACSM LAND TITLE SURVEY SHOWING 1896.590 +/- ACRES OF LAND LYING NORTH OF HULL STREET ROAD, U.S. ROUTE 360", dated March 10, 2006 by Timmons Group, which plat of survey is recorded in the Clerk's Office of the Circuit Court of Chesterfield County, Virginia in Plat Book 164, pages 87 through 94.

BEING the same property conveyed to Magnolia Green Development, LLC by deed from Salvatore J. Cangiano, dated March 16, 2006, recorded March 17, 2006 in Deed Book 7007, page 1800.

Tax Map Parcel Number	<u>Owner</u>	<u>Acreage</u>
703-667-2227	Magnolia Green Development, LLC	1664.283
703-667-2274	Magnolia Green Development, LLC	122.976
698-669-6309	Magnolia Green Development, LLC	109.331

The property to be included with the Authority district is also illustrated on the drawing attached hereto as Exhibit B-1.

Less and except a	total of 236.	342 acres desig	nated as Parce	els A through I	on the Plat Showing
Nine Parcels of I	Land Lying	North of Hull	Street Road,	dated June 20	, 2007 prepared by
Timmons Group, v	which plat is	recorded in the	Clerk's Office	of the Circuit	Court of Chesterfield
County, Virginia in	n Plat Book	, pages	through		

Exhibit C

Petition to Create Authority

Exhibit D

MATTERS CONFIRMED BY ADOPTION OF ORDINANCE

- 1. The Improvements shall be deemed to be in-kind contributions pursuant to the zoning conditions applicable to the Lower Magnolia Green Property, the cost of which will be applied to the \$1,600 per residential lot cash proffer for road improvements as provided in the zoning conditions.
- 2. The Improvements shall be accepted by the County in satisfaction of all requirements, if any, applicable to the Lower Magnolia Green Property relating to the construction of (i) any portion of the extension of the Powhite Parkway and (ii) any off site improvements other than those improvements specifically described in Section 3C(4) of the 1991 Textual Statement approved by the County in connection with the rezoning of the Lower Magnolia Green Property in 1991.
- 3. The Department of Transportation has concluded that no further traffic studies will be required in connection with the development of the Lower Magnolia Green Property. Accordingly, no reduction in densities will be permitted or required under the zoning conditions within the Lower Magnolia Green Property as a result of traffic conditions.
- 4. Subject to the condition set forth in the letter dated June ____, 2007 from the County's Director of Planning regarding subdivision and zoning requirements applicable to the Lower Magnolia Green Property, the development of the Lower Magnolia Green Property and the application of conditions of zoning applicable to the Lower Magnolia Green Property will not require any information from or action by (joint or otherwise) the owner or owners of any other property.
- 5. The obligations of the CDA will be independent from the obligations regarding the development of the Lower Magnolia Green Property and none of the work to be performed by the CDA will be conditions to the development of Lower Magnolia Green Property or the issuance of any approvals required for development of the Lower Magnolia Green Property.
- 6. The dedication of land required from the Lower Magnolia Green Property for school, park, library and fire station/rescue squad purposes being limited to (i) an elementary school site containing approximately 22 acres at the location shown on the Conceptual Plan (with the boundaries to be adjusted and the size of the site increased if a standard elementary school consistent with the requirements described on Exhibit D-1 attached hereto cannot be accommodated within the 22 acre site), (ii) a site for a library and a fire station containing approximately 10 acres within Parcel M as shown on the Conceptual Plan, (iii) a park site containing approximately 15.8 acres within the northern portion of Parcel CA as shown on the Conceptual Plan and (iv) in the event that public transportation is available in the area prior to 2010, a site for pickup and discharge of passengers that includes parking, at a location and in a size to be agreed upon by the Landowner and the County, in accordance with paragraph 3C(7) of the 1991 Textual Statement, it being agreed that the obligation to provide a pickup/discharge site would be satisfied by the execution of an agreement with the County for the joint use of

commercial property along Route 360 providing for park and ride parking. No later than July 1, 2014, the Landowner shall provide road access to the 15.8 acre park site by a road accepted into the state highway system for maintenance.

- 7. The amount paid in assessments to the CDA shall be in lieu of or credited toward, but not be in addition to, any impact fees which might be imposed by the County with respect to the Lower Magnolia Green Property.
- 8. The County having confirmed that it is the intent of the current Board of Supervisors that the CDA be in lieu of any service district which might otherwise be imposed on the Lower Magnolia Green property, if a service district is to be considered by the Board of Supervisors that will affect the Lower Magnolia Green Property, the County Administrator shall recommend to the Board of Supervisors that the amount paid in assessments to the CDA be credited on a prorata basis toward any assessment imposed pursuant to such service district.

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CHESTERFIELD COUNTY BOARD OF SUPERVISORS AGENDA

Meeting Date: August 22, 2007 Item Number: 16.B.

Page 1 of 2

Subject:
Public Hearing to Consider the <u>Upper Swift Creek Plan</u> Amendment and Companion Ordinance Amendments
County Administrator's Comments: County Administrator:
Board Action Requested:
Adopt the <u>Upper Swift Creek Plan</u> amendment and companion ordinance amendments.
Summary of Information:
At a Planning Commission meeting on July 19, 2007, the Planning Commission recommended the following:
The Commission recommended the following amendments to the <u>Upper Swift Creek Plan</u> amendment:
1. Amendment to the \underline{Plan} to provide level of service standards for roads.
2. Amendment to the $\underline{\text{Plan}}$ to provide level of service standards for public schools.
Preparer: Kirkland A. Turner Title: Director of Planning
Attachments: Yes No # 000202

CHESTERFIELD COUNTY BOARD OF SUPERVISORS AGENDA

Page 2 of 2

3. Amendment to the <u>Plan</u> relative to the Plan amendment to allow additional commercial uses for properties located on the south side of Route 360, between Route 288 and Winterpock Road between the AT&T Easement and Route 360, provided there is a buffer between commercial and residential uses.

The Planning Commission then recommended denial of the <u>Upper Swift Creek</u> Plan amendment.

The Commission recommended the following relative to the companion ordinance amendments:

- 1. Approval of amendments to the Subdivision and Utility Ordinances requiring mandatory water and wastewater connections for areas of the Plan geography suggested for uses other than deferred growth.
- 2. No recommendation on amendments to the Subdivision and Utility Ordinances prohibiting water and wastewater connections within the deferred growth area.
- 3. Denial of amendments to the Subdivision and Zoning Ordinances increasing buffers along arterial roads for residentially zoned properties.
- 4. Denial of an amendment to the Zoning Ordinance relating to water quality.

The <u>Upper Swift Creek Plan</u> amendment, once adopted, will guide future development within the <u>Plan</u> geography in a comprehensive manner that embodies the principles of the Introduction of the Plan.

The companion ordinance amendments, once adopted, will implement several of the goals and recommendations of the <u>Upper Swift Creek Plan</u> amendment.



Chesterfield County, Virginia

Memorandum

DATE:

AUGUST 10, 2007

TO:

THE HONORABLE MEMBERS OF THE BOARD OF SUPERVISORS

FROM:

KIRKLAND A. TURNER, DIRECTOR OF PLANNING

SUBJECT:

UPPER SWIFT CREEK PLAN AMENDMENT AND ASSOCIATED

ORDINANCE AMENDMENTS

In anticipation of your August 22, 2007, public hearing, please find attached the Upper Swift Creek Plan amendment and supporting documents, together with the associated ordinance amendments. Specifically, attached are the following:

- The Upper Swift Creek Plan amendment, together with supporting documentation regarding the land use, transportation and water quality recommendations of the Plan amendment. Some of the background information is briefly summarized in the draft Plan document under the heading: 'Summary of Key Findings and Recommendations'.
- Amendments to the Subdivision and Utility Ordinances requiring mandatory water and
 wastewater connections for areas of the Plan geography suggested for uses other than
 deferred growth. These amendments are similar to those previously adopted for other
 areas of the county and would implement Land Use Goal 1, Recommendation C of the
 proposed plan amendment.
- Amendments to the Subdivision and Utility Ordinances prohibiting water and wastewater connections with the deferred growth area. These amendments would implement Land Use Goal 1, Recommendation B of the proposed plan amendment.
- Amendments to the Subdivision and Zoning Ordinances increasing buffers along arterial roads for residentially zoned properties within the Upper Swift Creek Plan amendment geography, from fifty (50) feet to 200 feet. These amendments would implement Land Use Goal 4, Recommendation B of the proposed plan amendment.
- Amendment to the Zoning Ordinance to reduce phosphorous loading for development withing the Upper Swift Creek Watershed. Vested developments would not be affected.

If you have any questions, please feel free to contact Jimmy Bowling by phone at 748-1086, or by email at bowlingi@chesterfield.gov.

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Chesterfield County, Virginia

Memorandum

DATE: AUGUST 10, 2007

TO: THE HONORABLE MEMBERS OF THE BOARD OF SUPERVISORS

FROM: KIRKLAND A. TURNER, DIRECTOR OF PLANNING

SUBJECT: UPPER SWIFT CREEK PLAN AMENDMENT AND ASSOCIATED

ORDINANCE AMENDMENTS – PLANNING COMMISSION

RECOMMENDATIONS

On July 25, 2007, you set a public hearing for August 22, 2007, to consider the Upper Swift Creek Plan amendment and associated ordinance amendments. In anticipation of your August public hearing, the following summary of the Planning Commission's recommendations is provided.

The Planning Commission, at a public hearing on July 19, 2007, made the following recommendations.

Planning Commission recommendations - Upper Swift Creek Plan amendment

The Commission recommended the following amendments to the Plan (see detailed language on pages 2 and 3):

- Amendment to the Plan to provide level of service standards for roads
- Amendment to the Plan to provide level of service standards for public schools.
- Amendment to the Plan relative to the Plan amendment to allow additional commercial uses for properties located on the south side of Route 360, between Route 288 and Winterpock Road between the AT&T Easement and Route 360, provided there is a buffer between commercial and residential uses

The Planning Commission then recommended denial of the Upper Swift Creek Plan amendment.

Planning Commission recommendations - associated ordinance amendments

The Commission recommended the following:

- Approval of amendments to the Subdivision and Utility Ordinances requiring mandatory
 water and wastewater connections for areas of the Plan geography suggested for uses other
 than deferred growth.
- **No recommendation** on amendments to the Subdivision and Utility Ordinances prohibiting water and wastewater connections with the deferred growth area.
- **Denial** of amendments the Subdivision and Zoning Ordinances increasing buffers along arterial roads for residentially zoned properties.
- **Denial** of an amendment to the Zoning Ordinance relating to water quality.

Detailed Language

Following is the language of the Planning Commission's recommended amendments to the Plan:

Transportation — Recommendation A (page 11)

All rezoning applications are expected to pass a test for Adequate Road Facilities. A proposed rezoning does not pass the test for Adequate Road Facilities if the nearest major road and/or existing signalized intersection that will carry the majority of the traffic expected to be generated by the future development on the property proposed to be rezoned will have a Level of Service ("LOS") of "E" or "F". The LOS shall be determined by the Chesterfield Department of Transportation or designee based on current traffic studies and other reliable traffic data. Further, a proposed rezoning will pass the test for Adequate Road Facilities only if roads to be impacted by the proposed development have adequate shoulders, or where roads with inadequate shoulders are carrying, or are projected to carry, less than 4,000 vehicles per day.

Goals and Recommendation - Schools (Insert on page 22 after Water Quality Recommendations)

School Goal: Provide adequate facilities to relieve overcrowding and to respond to new growth. Recommendation -

a. All residential rezoning applications are expected to pass the test for Adequate School Facilities. A proposed residential rezoning will pass the test for Adequate School Facilities if all public elementary, middle and high schools that would serve the future development on the property proposed for residential rezoning currently have adequate capacity to accommodate additional students to be generated by the proposed rezoning. Schools shall be responsible for determining 1) the current enrollment for each school; 2) the capacity of each school; and 3) the anticipated impact of the proposed development based on the maximum number and type of residential dwelling units or lots, including proffers for limited or delayed development.

- b. If any of the applicable public schools which would serve the future residential development on the subject property exceed 120% of capacity at the time of the review of the subject rezoning request, the proposed rezoning does not pass the test for Adequate School Facilities. In addition, the proposed rezoning will not pass the test for Adequate School Facilities if the anticipated enrollment at any school to serve the subject rezoning will exceed 120% of capacity upon the development of 1) the property proposed for rezoning; and 2) all unimproved residential lots in the service area shown on approved preliminary site plans, preliminary subdivision plans and construction plans.
- c. When the capacity of any public school in the service area is determined to exceed 120% under the conditions described above, and where such school is expected to be improved to less than 120% of capacity within one year of the date that the Board of Supervisors is scheduled to consider the subject rezoning request, the residential rezoning will pass the test for Adequate School Facilities.

Land Use Plan map:

On the south side of Route 360 (between Route 288 and Winterpock Road) Commercial uses including neighborhood convenience, retail, restaurant and personal service uses are appropriate for properties between the AT&T easement and Route 360 provided there is a buffer between the Commercial and Residential uses.

If you have any questions, please feel free to contact Jimmy Bowling by phone at 748-1086, or by email at bowlingi@chesterfield.gov.

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Upper Swift Creek Plan (Proposed)

A proposed amendment to the Upper Swift Creek Plan, first adopted by the Chesterfield County Board of Supervisors on February 13, 1991.

Status of This Proposed Amendment

Version: Proposed plan amendment recommended by Planning, Transportation and Environmental Engineering Department staff as of *April 3, 2007*.

This is a proposed amendment to the *Upper Swift Creek Plan*, first adopted by the Chesterfield County Board of Supervisors on February 13, 1991, then amended by the Board on March 15, 2000.

The supporting documents referenced in this plan are not part of the plan and will not be published in the *Plan for Chesterfield*, but will be available through other sources.

For more information on the status of the proposed Upper Swift Creek Plan, see the Planning Department website at www.chesterfield.gov/plan or contact project manager Jim Bowling at Bowlingi@chesterfield.gov or 804/748-1086.

Note: This section will be removed from the plan upon adoption

Summary of Key Findings and Recommendations

- Balanced, Orderly Growth: The proposed Upper Swift Creek Plan balances the
 demand for residential, commercial and industrial growth in the Upper Swift Creek
 watershed with a recommended orderly development pattern based on three important
 concepts: a deferred growth area in the northwestern part of the planning area,
 mandatory utilities extension ordinances for development outside the "deferred growth"
 area, and a prohibition on extending utilities into the deferred growth area.
- Economic Development: The proposed Upper Swift Creek Plan encourages economic
 development by recommending that many areas along Hull Street Road and around
 interchanges be reserved primarily for employment and other revenue generating uses.
- Residential Development Potential: Analysis undertaken in the development of this plan identified 16,186 dwellings in the planning area as of December 31, 2006, and projected that about 15,256 additional dwellings could be built on vacant land already zoned for development as of that date. This same analysis projected total residential build out for the planning area at about 51,094 dwellings under the 1991 Upper Swift Creek Plan, and about 43,434 dwellings under this new plan (not including any subsequent development in the recommended deferred growth area, other than the suggested development recommended by this plan).
- Unzoned Land Recommended For Residential Development: Under this new plan, only about 11 percent (4,956 acres) of the total parcel acreage within the Upper Swift

Creek watershed remains vacant and agriculturally zoned, but recommended for development.

- **Deferred Growth:** This area, which totals about 4,900 acres, is recommended for primarily very low-density (non-subdivision) uses, with other types of development deferred until the plan is amended through a subsequent review.
- Water Quality: The plan recommends future land uses and initiatives that, combined with established and planned best management practices, are projected to result in Swift Creek Reservoir phosphorous levels not exceeding the established 0.05 milligrams per liter standard.
- **Transportation:** This plan identifies transportation needs and recommends modifications to the county's *Thoroughfare Plan*.
- **Forested Views:** This plan promotes protection of scenic resources by recommending consideration of ordinance amendments to increase buffering along arterial roads.
- Mandatory Utilities Extension: The plan recommends that the utilities extension policy recommended by the 1991 Upper Swift Creek Plan be made mandatory through the adoption of county ordinances to require water and wastewater system connections for most types of development.

I. Introduction

In April of 2003, the Chesterfield County Board of Supervisors asked County staff to undertake a review of the adopted *Upper Swift Creek Plan* in response to concerns regarding the impact of growth on infrastructure, water resources, and the environment. In particular, development trends within the planning area generated interest in reviewing recommendations of the plan, first adopted in 1991.

The *Upper Swift Creek Plan* is a tool that the county can use to shape the pace and pattern of development within the plan geography over time. Other tools are needed to address present, or near-term, growth issues. The plan also implements, updates, and refines selected recommendations of the 1991 plan based on what the county has learned and the area has experienced since that plan's adoption.

The 1991 Upper Swift Creek Plan had as its goals:

- 1. Maintenance of Swift Creek Reservoir's water quality.
- 2. Balance between residential and commercial growth.
- 3. Conservation of environmental and aesthetic resources.
- 4. Variety of housing types and opportunities.
- 5. Provision of high quality, yet efficient public facilities.
- 6. Phased growth
- 7. Access to both active and passive recreational opportunities.

The 1991 plan pursued these goals with recommendations for land use, phasing of development and public facilities. The county has subsequently implemented many of these goals through ordinance (such as the Historic Districts, Landmarks and Landmark Sites Ordinance, the Chesapeake Bay Preservation Areas Ordinance, and the Upper Swift Creek

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Watershed Ordinance), through amendments to other elements of the comprehensive plan (such as the *Water Quality Plan* and the *Public Facilities Plan*) and by using the adopted *Upper Swift Creek Plan* as a guide in the zoning process.

The *Upper Swift Creek Plan* amendment, as outlined herein, continues and expands upon this work.

Planning Area Boundaries

The *Upper Swift Creek Plan* includes most of the geography of the 1991 *Upper Swift Creek Plan*. That small portion of the 1991 plan physically separated from the planning area by the 1998 *Route 288 Corridor Plan* is not included in the geography of this plan, but is included in the pending *Robious Area Plan*. The planning area includes most of the Upper Swift Creek watershed located within the jurisdiction of Chesterfield County.

Magisterial Districts

The *Upper Swift Creek Plan* geography lies within the Matoaca Magisterial District (about 82 percent of the planning area geography), the Clover Hill Magisterial District (about 14 percent of the planning area geography), and the Midlothian Magisterial District (about four percent of the planning area geography).

How this Plan Works

Chesterfield County's comprehensive plan, *The Plan For Chesterfield*, is used by citizens, staff, the Planning Commission and Board of Supervisors as a guide for decisions affecting the county, including, but not limited to, those regarding future land use, transportation networks and zoning actions. However, the *Upper Swift Creek Plan* represents only one part of the county's comprehensive plan. It is one of about twenty area, corridor and village plans, each of which focuses on managing and directing the future pattern of development within a specific geography of the county, taking into account the unique development pattern and development history of the area.

As any plan geography is but one part of the larger community of Chesterfield County, the needs of a specific area must be considered within the context of the needs of the county as a whole. Other components of *The Plan For Chesterfield* are countywide plans, which address issues and needs on a countywide basis. These include: the *Thoroughfare Plan*, the *Water Quality Protection Plan*, the *Public Facilities Plan*, the *Bikeway Plan and* the *Riverfront Plan*. Some of these plans, such as the *Public Facilities Plan*, require a countywide review process to determine how limited county resources should be distributed.

Background Analysis

The Planning Department, in conjunction with other county departments, assessed existing conditions and development trends within the planning area. The results were summarized and shared with public officials and interested citizens throughout early phases of the plan development process. The following assessments and analyses serve as the basis for the Goals and Recommendations of this plan, and are available for review as supporting documents, A through I.

- Supporting Document A Upper Swift Creek Plan Amendment: Existing Conditions and Issues
- Supporting Document B Upper Swift Creek Plan Amendment: Land Use Analysis Residential, Office, Commercial and Industrial
- Supporting Document C Upper Swift Creek Plan Amendment: Transportation Options
- Supporting Document D Technical Memorandum: Upper Swift Creek Plan Total Phosphorus Loading Analysis for Planned Land Use Scenarios
- Supporting Document E Existing Conditions, Environmental Inventory
- Supporting Document F Assessment of Biology, Habitat and Chemistry of Streams in the Upper Swift Creek Watershed, Chesterfield County, Virginia.
- Supporting Document G Upper Swift Creek Watershed Riparian Buffer Analysis
- Supporting Document H Technical Memorandum: Construction Site Sediment and Total Phosphorus Loading
- Supporting Document I Education and Outreach Program

Citizen Participation

Planning Department staff, together with representatives of other county departments, met with area residents, community groups, property owners and businesspersons throughout the winter, spring, and summer of 2004 to discuss amending the 1991 *Upper Swift Creek Plan*. These meetings included: an education component on the comprehensive plan and its relationship to zoning, land development, and existing and future land use patterns; opportunities for citizens to share their concerns about existing development conditions and their desires for the future of their community; and opportunities for county staff to explain the limitations and opportunities, inherent in the plan amendment process, to address citizen concerns and desires.

II. A Plan for Action

The *Upper Swift Creek Plan* will help guide future development in ways that balance the interests of Chesterfield County's current and future residents, landowners, businesses and development community. Specifically, the Code of Virginia defines the primary purpose of the comprehensive plan as follows:

To guide and accomplish a "coordinated, adjusted and harmonious development" of county lands "which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare" of county citizens.

The Upper Swift Creek Plan makes no attempt to determine the current or short-term marketability of any one parcel for any one use. Rather, it attempts to anticipate future needs for broad categories of

uses throughout the planning area for the next twenty years. In addition, the *Upper Swift Creek Plan* does not rezone land, but serves as a guide for making decisions relative to future rezoning applications. Finally, the plan attempts to suggest the proper relationship of land uses to one another and to the wider community. Market forces (availability and price of land, location, character and age of competing businesses, site specific characteristics such as topography and visibility from roads, accessibility to roads, area demographics, etc.) will determine the desirability of a specific use on one parcel over another, as well as the timing for developing such use, based on the principle of 'highest and best use'. The zoning process will determine the appropriateness of such use on a case-by-case basis by applying principals of desirable land use development patterns and adequacy of public facilities embodied in the comprehensive plan.

The *Upper Swift Creek Plan* does seek to promote a balance between residential, commercial and industrial growth. Such balance contributes to the area's long-term economic strength, to revenue generation, and to fostering a greater sense of community by recommending future land uses that encourage housing, services, and employment, which can interrelate to create a sense of place.

To these ends, the Planning Commission and Board of Supervisors have incorporated into *Land Use Plan* amendments guidelines that promote development patterns, which facilitate the orderly, harmonious, predictable and efficient use of the 446.5 square miles of land and water within its boundaries. These guidelines, as they apply to specific plan areas of the county, are embodied in the goals and recommendations of adopted plan amendments.

Goals and Recommendations - Land Use

Land Use Goal 1: Promote orderly development patterns.

The foundation of The *Plan for Chesterfield* is orderly development as an overall approach to managing the county's future growth. Orderly development means that future growth should be directed into appropriate locations within existing, developed areas with fringe development being an orderly extension beyond current developed areas. *The Plan for Chesterfield* strives to manage growth by fostering an orderly and generally predictable pattern of development and promoting a timely, orderly and efficient arrangement of public facilities and services to serve existing and future development.

Recommendations

A. **Deferred Growth:** Adopt the Deferred Growth area shown on the land use plan map for the western portion of the Upper Swift Creek Plan geography. Public water and wastewater should not be extended into this area until the plan is amended through a subsequent review.

Providing a Deferred Growth area in the western portion of the plan geography will promote orderly development by discouraging leapfrog or sprawl development and promote efficient delivery of infrastructure to support growth.

Activities within the Deferred Growth area should be limited primarily to agricultural and forestall uses with single-family residences permitted along existing area roads on large

parcels. Other types of development should be deferred until the plan is amended through a subsequent review.

The Deferred Growth area would discourage a leapfrog development pattern, with new subdivisions interspersed with undeveloped land. This pattern of development could overburden other public facilities, such as roads and schools, and adversely impact ground and surface water quality in the area for those area residents dependent on wells and septic systems. Adopting the Deferred Growth area in the western portion of the plan geography will reinforce current practices to promote orderly development and efficient delivery of infrastructure to support growth.

B. **Delay Utility Extensions:** Adopt ordinance amendments designed to prohibit expansion of the public water and wastewater systems for uses within the deferred growth area until the plan is amended through a subsequent review.

Development within the deferred growth area should be delayed until the plan is amended through a subsequent review. Prohibiting public water and wastewater extensions within the deferred growth area would be one means of ensuring that development is limited primarily to agricultural and forestall uses, with single-family residences permitted along existing area roads on large parcels, until such time that the status of the deferred growth area is reviewed through a subsequent plan amendment.

C. Subdivision and Utilities Ordinances: Adopt ordinance amendments to require mandatory connection to the public water and wastewater systems for most types of development.

Use of the public water and wastewater systems will allow a flexibility of development that would not otherwise be possible. This flexibility could include residential development of a wider range of densities and configurations than would be possible without public water and sewer, as well as some control over the timing of development as new residential projects would have to wait for water and sewer extensions.

Use of water and wastewater is currently negotiated through the zoning process. Amending the utilities and subdivision ordinances to require mandatory use of water and wastewater would eliminate the need for such negotiations. In addition, extensions of water and wastewater services would continue to be used as a tool to phase, direct, and/or pace development.

Land Use Goal 2: Promote economic development opportunities.

The *Plan for Chesterfield* encourages the designation of key locations for economic development. Once area major arterial roads are built or committed for construction, the areas suggested in the *Upper Swift Creek Plan* for Regional Mixed Use and Regional Employment Center uses will have access to markets. Vacant land in these areas, as well as improved properties with potential for redevelopment, should be reserved for employment generating uses. Commercial development serving these uses and larger markets would also be appropriate near the interchanges. New residential development, as well as piecemeal, strip commercial development should be discouraged in these areas.

Recommendation

A. **Employment Generating Uses:** Use the plan to discourage residential and retail commercial development from locations the plan recommends for employment generating uses. Retail and service uses that serve primarily surrounding employment center uses may be appropriate when part of a larger industrial and/or office development. The scale and mix of such retail and service uses should be proportionate to the needs of the primary employment center uses and should not be built until the employment center uses have developed to a density sufficient to support such retail and service uses, without such retail and service uses having to rely on larger markets for financial success.

Employment generating uses produce tax revenues, which defray the costs of providing services to county residents. In addition, such uses provide residents with jobs both within the county and close to home, thereby reducing commuting distances, travel time, air and water pollution and travel expenses. This, in turn, enhances the quality of life for working citizens and their families.

Generally, residential and retail commercial development in proximity to interchanges, together with potential pressure for additional non-employment development in other parts of the planning area may, if not properly evaluated, limit opportunities for development of employment generating uses. However, opportunities will arise over time for development of new employment generating uses in areas where adequate access and mitigating road improvements can be provided. Commercial nodes that support employment generating uses could be incorporated into the design of larger projects, further contributing convenience and to reducing travel distances. This strategy may require that pressure to develop in some locations, for uses other than employment generating uses, be discouraged until market conditions become conducive to employment development. However, such delay will benefit the community in the future by promoting, over time, a better-balanced development pattern.

Land Use Goal 3: Promote a greater variety of residential types.

The *Plan for Chesterfield* encourages provision for a variety of residential areas, thereby allowing residents a choice of neighborhood and living environments.

Recommendation

A. **Residential Amendments Project:** As part of the Planning Department's on-going Residential Development Amendments project, consider various clustering, conservation/subdivision, traditional neighborhood design, and rural residential subdivision options as possible new Zoning Ordinance residential categories.

The Planning Department has embarked on a project to update the residential portion of the county's zoning ordinance. Considering additional development options as part of the Residential Development Amendments project will offer opportunities to develop neighborhoods of unique character and sensitivity to the environment, while allowing residential development to occur at densities suggested by the comprehensive plan. Some of these new residential types could include standards designed to better

preserve some of the existing natural and forested character of many properties as future residential zoning and subsequent development occurs. Options to achieve this goal could include, but should not limited to, various clustering and conservation/subdivision configurations, increased setbacks and buffering along area roads to encourage preservation of forested views along roads, and connectivity between natural areas, between natural areas and neighborhoods, and between neighborhoods.

The existing forested landscape, stream valleys and natural areas of much of the planning area have scenic and passive recreational value which many residents and visitors find attractive. Opportunities exist to preserve the existing visual appeal of forested areas within the planning area, and to provide connectivity between natural areas and neighborhoods, as new development occurs. In addition, opportunities exist to create a greater variety of housing types and lifestyle choices for county citizens.

B. **Residential compatibility:** Continue to use the zoning process to encourage new residential subdivisions with sole access through an existing or planned subdivision to meet or exceed the average lot size of, and have a density equal to or less than, the existing subdivision.

The Plan for Chesterfield encourages actions that stabilize and improve the health of existing neighborhoods in order to forestall decline and blight and contribute to the overall health of the larger community. Residential developments of varying densities and lot sizes encourage variety in residential areas and offer County citizens a choice of neighborhoods, living environments and lifestyles.

New subdivisions developing within the study area increase the availability of housing in this part of the county. However, such residential development should be designed to protect existing neighborhoods and enhance the larger community.

Land Use Goal 4: Preserve, protect and promote identified historic, scenic and natural resources.

The Plan For Chesterfield encourages the preservation of historic, scenic and natural resources.

Recommendations

A. Adaptive Reuse of Historic Structures: Encourage the preservation of historic structures and sites by allowing adaptive reuse that is compatible with existing and anticipated area development. Specifically, historic structures may be appropriate for office or light commercial uses if the property owner retains the structure, is willing to have it designated as a Chesterfield County historic landmark, and mitigates impacts of commercial use on surrounding properties. However, such designations should be exclusive of property required for future infrastructure improvements, such as road rights-of-way.

Many sites within the planning area have historic significance. These include 19th and early 20th century homes and structures. *The Plan For Chesterfield* encourages the identification and preservation of lands, sites and structures that have historic

significance. Protection of such structures and sites through adaptive reuse offers opportunities for preserving, presenting and interpreting the county's historic heritage.

The 1991 *Upper Swift Creek Plan* identified 21 historic sites and structures for consideration for preservation. Since then, five of these resources have been lost, and others are degraded and could be impacted by development. However, a number of 19th and early 20th century structures (homes, churches, stores, etc.) remain, providing opportunities to preserve a sense of continuity for the community and contributing to the area's distinct sense of history and place.

B. **Forested Views:** Adopt ordinance amendments to increase buffering along arterial roads in order to ensure that new residential developments along forested corridors preserve existing forested vistas adjacent to, but outside the ultimate rights of way of, area roads.

The 1991 Upper Swift Creek Plan suggested that development throughout the area should preserve existing natural settings and vistas. It further suggested that the natural forested corridor along Genito Road, west of Swift Creek Reservoir, should be maintained with special design standards and with deep, densely wooded buffers. An ordinance amendment would better promote this recommendation as development occurs.

As the county continues to grow and develop, the forested character of some areas in the county, including much of the planning area, will be impacted by anticipated changes in land use patterns. However, by continuing the work begun with the 1991 Plan, opportunities exist to ensure that the existing forested vistas, as viewed from area roads, are preserved.

C. Conservation/recreation corridors: Use the plan to identify conservation/ recreation corridors.

The planning area has several stream valleys with significant, undeveloped RPAs, much of which is currently protected from intense development by the county ordinances, as well as by state and federal regulations. These regulations are designed to preserve environmentally sensitive areas such as wetlands, wildlife habitat and floodplains, as well as to preserve mature trees and native vegetation. In addition, such corridors provide visual and distance separation between residential and non-residential development, as well as provide area residents and the employees of area businesses with opportunities for exercise, recreation, relaxation and education.

Some Resource Protection Areas (RPAs) and other environmentally sensitive areas are already zoned and/or developed for residential and commercial uses. However, many others are relatively undeveloped and may provide opportunities for open space preservation and recreational activities through various cooperative public/private efforts.

Land Use Goal 5: Encourage land use transitions.

The Plan for Chesterfield encourages land use transitions between less intense uses, such as residential neighborhoods, and more intense uses, such as commercial and higher intensity

regional and employment generating uses, as a means of promoting orderly development patterns that are designed to protect neighborhoods.

Recommendation

A. Land Use Transitions: Use the plan to suggest land use transitions, including higher density residential and office uses, between lower density residential development and commercial and higher intensity employment generating uses.

A hierarchy of land uses, from more-to-less intense uses, provides the best protection to residential neighborhoods. Other protections (buffers, orientation of uses, and design standards which reduce nuisances such as noise, and light, etc.) are supplemental mitigation to the primary protection provided by physical separation between incompatible uses. Therefore, transitional uses contribute to the overall appearance and livability of the community.

Portions of the existing land use pattern within the planning area, particularly along Route 360, are characterized by residential areas adjacent to older commercial strip zoning and land uses. In some instances, these residential areas do not have the benefit of buffers or other mitigating design features to lessen the impact of adjacent, commercial activity. However, in many places, encouraging greater depths of non-residential zoning can afford opportunities to provide land use transitions between more intense uses and residential neighborhoods. In other places, where such depth is not available, developers may be able to work with nearby residents to incorporate design features that mitigate potential adverse impacts on nearby neighborhoods.

Goals and Recommendations – Transportation

The automobile is and, for the foreseeable future will remain, the predominant mode of transportation in the Upper Swift Creek Plan area and in the county as a whole. Most roads in the Upper Swift Creek Plan area are substandard, and will have to be improved to accommodate even minor increases in traffic resulting both from development within the county and in the surrounding regions. The county's Thoroughfare Plan identifies the future road network needed to accommodate future traffic volumes. It has been the county's policy for development to construct planned roads (other than freeways) to help mitigate their traffic impacts. State funding has been used to improve existing roads. Funding from the Virginia Department of Transportation (VDOT) has been inadequate to address existing needs, and the prospects for additional state funding are uncertain at best. Alternate funding sources continue to be investigated to address the shortfall between needs and funding.

Transportation Goal: Provide a safe, efficient, and cost effective transportation system.

The county's Thoroughfare Plan, which was originally adopted by the Board of Supervisors in 1989, identifies right-of-way classifications of existing roads, and right-of-way classifications and general alignments of future roads. As development occurs in the Upper Swift Creek Plan area, in other areas of the county, and in the region, road improvements will be needed in this area to accommodate increasing traffic volumes and reduce congestion.

Recommendations

A. Thoroughfare Plan Modifications: **Approve modifications to the adopted Thoroughfare Plan as shown on the map in Supporting Document C:**

- 1. Increasing the recommended right-of-way width on the proposed North/South Major Arterial ("Woolridge Road Extended") between Route 288 and the proposed East/West Major Arterial just south of Powhite Parkway Extended from 90 feet to 120 feet. A six-lane road will be needed to accommodate future traffic volumes on Woolridge Road. The additional right-of-way is needed to accommodate the six lane road:
- 2. Increasing the recommended right-of-way width on the proposed East/West Major Arterial north of Hull Street Road, connecting Otterdale Road and a large planned development (Magnolia Green), from 70 feet to 90 feet. This wider right-of-way will better accommodate traffic generated by the proposed land uses in this area;
- 3. Decreasing the recommended right-of-way width of Watermill Parkway from 90 feet to 70 feet. A grade-separation of this roadway is planned at the future Powhite Parkway Extension. With the construction of Woolridge Road Extended, the existing two-lane road will be adequate to accommodate the projected traffic volumes;
- 4. Deleting the proposed interchange on Route 288 south of the Genito Road overpass, and the East/West Major Arterial connecting the interchange to Old Hundred Road to the west, and to Warbro Road to the east. The interchange was originally planned to help promote economic development. However, the land uses being developed around the proposed

interchange are lower in density than were anticipated, and the interchange is no longer needed:

- 5. Deleting Hensley Road between Spring Run Road and Springford Parkway. This section of Hensley Road has been constructed into a cul-de-sac at its western end as part of a recent development project;
- 6. Deleting the proposed East/West Collector connecting Otterdale Road with Fox Club Parkway. As a result of a recent zoning case, this proposed Collector will not connect with Fox Club Parkway;
- 7. Deleting the proposed East/West Major Arterial connecting Winterpock Road to Spring Run Road just south of Hull Street Road, and replacing it by adding McEnnally Road between Winterpock Road and Spring Run Road as a 90 foot Major Arterial. This change is the result of approved zoning cases;
- 8. Deleting the proposed North/South Major Arterial that extends west from Otterdale Road north of Genito Road, crosses Powhite Parkway Extended, and connects to the proposed East/West Major Arterial. This change is the result of approved zoning cases, and is recommended due to topography and existing development;
- 9. Realigning the western section of the proposed East/West Major Arterial that currently aligns with Lacy Farm Road to the north, closer to the Norfolk Southern railroad line. The realignment is being considered in conjunction with a proposed zoning, and at the request of the developer and residents along Lacy Farm Road;
- 10. Realigning Powhite Parkway Extended and the proposed interchange in the Genito Road area. The realignment was requested by residents in this area (see Supporting Document C Map: Realignment of Powhite Parkway Extended and Genito Road Proposed Interchange);
- 11. Realigning the intersection of the eastern end of Mount Hermon Road with the proposed North/South Major Arterial. The existing intersection is adjacent to the Norfolk Southern railroad crossing. Greater separation will better accommodate increased traffic volumes as the area develops;
- 12. Realigning the East/West Major Arterial connecting Otterdale Road Extended with Winterpock Road further to the north, and deleting the southern section of the North/South Arterial connecting this road with Beach Road. This change is the result of a zoning case in this area;
- 13. Realigning Mount Hermon Road north of Genito Road, and Mount Hermon Road Extended south of Genito Road. This realignment is necessary due to the location of a Church on the south side of Genito Road, and is consistent with the development of Horner Park;
- 14. Changes in the road network based on Magnolia Green development that include: 1) adding a proposed 70-foot North/South Collector connecting Duval Road west of Otterdale Road with the proposed East/West Arterial to the north; 2) shifting the alignment of the proposed Powhite Parkway; 3) relocating the proposed interchange on Duval Road to the proposed east/west major arterial; and 4) realigning other planned roads within Magnolia Green. These roads are shown on the Magnolia Green Master Plan;

- 15. Adding Ledo Road as a 70 foot Collector. This change is recommended due to the proposed land use in this area; and,
- 16. Providing cul-de-sacs on Otterdale Road at the Powhite Parkway Extension. This section of Otterdale Road has very poor alignment and no shoulders. The cost to reconstruct the road would be excessive. The proposed East/West Major Arterial and Woolridge Road Extended, which will be constructed in conjunction with new development, will better accommodate increasing traffic volumes.
- **B.** Development Conforming To Thoroughfare Plan: Continue zoning and development review practices to encourage development proposals to conform to the Thoroughfare Plan with respect to the construction of road improvements and the dedication of right-of-way.
- **C. Mitigation of Traffic Impacts:** Continue zoning and development review practices to encourage development proposals to include mitigation of their traffic impacts by providing road improvements and controlling the number of direct accesses to major arterial and collector roads.
- **D.** Bikeway Plan: As improvements are provided on roads identified in the county's Bikeway Plan, continue to consider incorporating bicycle facilities.

Staff has evaluated the ability of the current Thoroughfare Plan, when fully in place, to accommodate the traffic generated by total build-out of the county. From a road capacity standpoint, the Thoroughfare Plan network, when completed, will adequately accommodate build-out traffic volumes.

While the Thoroughfare Plan, when fully developed, will be adequate to accommodate "build-out" of the county, most of the existing road network requires complete reconstruction today in order to accommodate even minor increases in traffic. Most of the existing roads in the Upper Swift Creek Plan area are currently unsafe. The roads have no shoulders, poor vertical and horizontal alignments, and must be improved to safely accommodate increases in traffic.

According to the Growth Analysis Report, the Planning Department has estimated that build-out of the entire county could take at least 50 or more years. Staff has estimated that it could cost approximately \$3 billion countywide to upgrade existing roads, excluding freeways, to accommodate the increased traffic resulting from build-out. Approximately \$400 million of those road costs would be in the Upper Swift Creek Plan area.

Improvements to some of these existing roads may be provided in conjunction with development projects. Other improvements will need to be funded through public sources. Based on current VDOT revenue forecasts, the county anticipates receiving an average of only about \$27 million per year in the coming years, countywide, to improve both Primary and Secondary roads. The prospects for additional state funding are uncertain at best. Even if the county were to receive \$27 million a year for the next 50 years, there would be an anticipated shortfall of approximately \$1.6 billion. A shortfall in funding for road improvements is not unique to Chesterfield County. It is impacting other localities around the state, and around the country.

Some of the road improvement funds available to the county are being used in the Upper Swift Creek Plan area. There are currently several road improvement projects, in and adjacent to the

plan area, that are in the Secondary and Primary Six Year Improvement Plans, or that are otherwise funded:

- · <u>Hull Street Road</u> widen to 6 and 8 lanes from Swift Creek to Winterpock Road. The project is funded with state funds and county bond proceeds. Construction is anticipated to begin in the Spring of 2006.
- Hull Street Road a project to add a fourth westbound lane on Hull Street Road from Route 288 to Old Hundred Road/Commonwealth Center Parkway. Construction is planned for Spring 2006.
- <u>Bailey Bridge Road</u> three spot safety projects and one reconstruction project at various locations between Route 288 and Spring Run Road. One project has been completed. Anticipated construction start dates for the remaining projects range from Summer 2006 to Spring 2010.
- <u>Spring Run Road</u> improve curves between McEnnally Road and Bailey Bridge Road. Anticipated construction start date is Fall 2007.
- · <u>Woolridge Road south of Crown Point Road</u> improve curve. Construction is anticipated to start in 2008.

Several potential options have been considered for supplementing the road improvement funds received from the state. These options are outlined in the Supporting Document C: Upper Swift Creek Plan Amendment: Transportation Options

This plan makes recommendations on modifications to the county's Thoroughfare Plan. Winterpock Road is currently identified as a 90 foot Major Arterial. Staff has identified the need for Winterpock Road to be six lanes wide (120 foot wide right-of-way) to accommodate traffic volumes at total build-out of the county. However, most of the property along Winterpock Road has already been "roadstripped". Changing the recommended right-of-way width on Winterpock Road from 90 feet to 120 feet to accommodate the future six lane widening could adversely impact current residents along the road. Staff will only seek the wider 120 feet of right-of-way in conjunction with new development proposals.

Almost all roads in the county are the responsibility of and maintained by VDOT. However, Woolridge Road over Swift Creek Reservoir is a county road. The county has no road maintenance budget and no formal maintenance program. This section of Woolridge Road has three box culverts that are over 50 years old. The pavement section is substandard, primarily consisting of asphalt placed on top of soil. Any improvements to this section of Woolridge Road, estimated to cost between \$8 and \$9 million, would have to be funded by the county.

The county's Thoroughfare Plan includes the extension of the Powhite Parkway from its current terminus, through the Plan area, to Hull Street Road. During the design and construction of the extension, the County should coordinate with the appropriate Federal and State agencies and private entities to ensure that the highest water quality standards and practices are employed so that the quality of the Swift Creek reservoir will be preserved.

Rail Service

One railroad line passes through the Upper Swift Creek Plan area. This Norfolk Southern line is currently in use for limited freight service. The Richmond Area Metropolitan Planning Organization (MPO) recently commissioned a report on the feasibility of providing Light Commuter Rail transit service in the Richmond region. A section of the Norfolk Southern line east of the Plan area was recommended for use. The last recommended station was in the Midlothian Village area.

There have also been discussions concerning a more regional rail passenger service. One part of the service would utilize the Norfolk Southern line to accommodate the Richmond to Lynchburg route. Improvements to the rail line would be necessary before the service could be initiated. There have been discussions about providing commuter rail service that would utilize the improvements to the line to extend commuter service further west than the Village of Midlothian. One of several proposed stations in the county would be located along Mount Hermon Road near County Line Road. The line would provide commuter rail service between western Chesterfield County and the Richmond International Airport. The proposal has not progressed beyond the discussion stage.

Public Transportation

The Chesterfield County Coordinated Transportation Program, Access Chesterfield, provides transportation services for any Chesterfield County resident who is disabled, or over age 60, or who meets federal income guidelines regarding poverty levels. Transportation providers are contracted by the Chesterfield County Access Chesterfield program to provide transportation service within the Chesterfield County, Richmond, Petersburg, Hopewell and Colonial Heights metropolitan areas. The program offers advance reservations for ride sharing with other passengers.

RideFinders provides numerous transit programs and services in the Richmond region, including organizing vanpools in response to commuters' requests. RideFinders' vanpools presently serve locations in the county such as Brandermill and Midlothian. RideFinders also provides a matching service to assist commuters in organizing carpools.

Bikeway Plan

The county's Bikeway Plan was adopted by the Board of Supervisors in 1989. The purpose of the Bikeway Plan is "to designate a coordinated system of bike facilities to connect county and state parks with other high bike traffic generators such as schools." The Bikeway Plan is not intended to designate roads that are appropriate for bicycle travel, but to identify routes where bikeway facilities should be provided in conjunction with future road improvement projects. In the Upper Swift Creek Plan area, Old Hundred Road, Genito Road, Spring Run Road, Bailey Bridge Road, and a section of Otterdale Road are designated in the Bikeway Plan as part of the "bikeway network". In accordance with the Bikeway Plan, staff will consider including bike facilities along these roads in conjunction with future road improvements.

Park-and-Ride Lots

The Transportation Department has, on occasion, requested that developers consider including facilities to accommodate "park-and-ride" lots or commuter drop-off lots. These are areas that

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could be used by commuters to provide convenient places for carpoolers and vanpoolers to meet and park their cars. Developers have been reluctant to designate these areas, due to the requirement that additional parking areas also be provided. The Transportation Department will continue to request these areas when large-scale development occurs along major commuter routes. However, there is no intention at this time to make these areas a requirement.

Goals and Recommendations – Environmental Quality

The boundary of Upper Swift Creek Plan amendment encompasses a portion of the 64.0 square miles (approximately 42,000 acres) that makes-up the Swift Creek Reservoir Watershed. The watershed is located in the northwest corner of the county. The headwaters of the watershed approximately 7000 acres are located in Powhatan County. The watershed drains to the Swift Creek Reservoir, one of the county's three drinking water sources. The Reservoir produces approximately eight million gallons of water per day (design 12Mgal/day), providing drinking water to 30 percent of the county's citizens. The rolling hills, hardwood forests, 1,700-acre Swift Creek Reservoir and eight major tributaries draws citizens to live, work and recreate in the region.

Approximately 7000 acres or 20 percent of the 35,000 acres contained within the county's portion of the watershed is developed. The remainder of the area has been recommended by county plans for significant change over the next 20 years. Because of this growth, continued vigilance and improved practices and standards should be encouraged to ensure that development within the watershed contributes to the maintenance of water quality of the reservoir and tributary streams.

To address the problem of urban runoff, under the Clean Water Act, in 1992, the U.S. Environmental Protection Agency (EPA) issued municipal storm water regulations. These regulations require large municipalities, including Chesterfield County, to obtain and comply with National Pollutant Discharge Elimination System (NPDES) permit to discharge storm water. In 1996, Chesterfield County obtained a Virginia Stormwater Management Program (VSMP) permit (also known as a municipal separate storm sewer system, or MS4, permit), issued through the Virginia Department of Conservation and Recreation (DCR). The permit requires the county to implement effective management practices and enact a local stormwater program to include education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control, and pollution prevention.

Environmental Goal: Maintain state and federal water quality standards of Swift Creek Reservoir and its tributaries.

This goal reflects the importance of protecting the Swift Creek Reservoir Watershed and its resources to preserve the reservoir as a viable source of drinking water. In addition, protecting the natural resources associated with the Reservoir (i.e. wetlands, streams, ponds, and lakes) provides for abundant habitat for wildlife and outdoors activities including fishing, hunting, birdwatching, and boating.

Recommendations:

A. Promote land uses and development standards that are consistent with the protection of critical natural systems within watershed and that will facilitate maintenance of state water quality standards for area streams and Swift Creek Reservoir.

In 1997, the Board of Supervisors adopted a Watershed Management Master Plan for the Swift Creek Reservoir Watershed. The Watershed Management Master Plan includes an in-lake phosphorous limit and establishes measures such as a reduced phosphorous standard for new residential development and the construction of regional Best Management Practice (BMP) basins to filter pollutants to ensure that the 0.05 mg/L in-lake phosphorus limit is maintained under suggested land use conditions. The limit was a threshold intended to protect general water quality and to ensure the viable use of the reservoir as a drinking water source. Without adequate management strategies for the reduction of nutrients to Swift Creek Reservoir, a variety of detrimental water quality and treatment problems are possible. These include excessive algal blooms, taste and odor problems, and depleted oxygen levels, all of which lead to increased cost of water treatment. Additionally, the adverse effects of pollutants on fish and other aquatic organisms may limit the reservoir as a recreational water body. The regional Best Management Practice strategy has been met with resistance by state and federal agencies. Therefore, other means of protecting water quality need to be developed and employed as a means of protecting the watershed, its resources and the Reservoir. The following recommendations will be implemented as part of the modifications to the county's Watershed Master Plan.

• Land Use Plan: Adopt a land use plan that is projected to result in future development that will have less of a water quality impact than the current Upper Swift Creek Plan (adopted in 1991 and amended in 2000).

Annual total phosphorus loads were calculated for four scenarios, testing different residential densities for the future *Upper Swift Creek Plan*. In-lake phosphorus concentrations were predicted for each scenario. The results of this modeling showed that the land use modifications of the preferred land use plan anticipated by the recommended *Upper Swift Creek Plan* would have less impact on area water quality than the current, adopted plan. Modeling of the proposed land use scenario indicates that the incorporation of the deferred growth area is critical for the maintenance of the phosphorous levels within the Reservoir (see Supporting Document D).

B. Protect and preserve the critical natural systems and areas within the watershed, which currently provide maintenance for water quality.

While there has been a significant focus on the protection of Swift Creek Reservoir for the past fifteen years, there has not been adequate attention to the protection of other important environmental resources such as wetlands, riparian corridors and stream systems located within the watershed (Supporting Document E). The functions of these features are significant to watershed health, and any loss of these features will contribute to water quality degradation. While state and federal agencies regulate impacts on those resources, they are often impacted by permitted activities, and the mitigation of the impacts is allowed to take place outside of the county. Identifying the location, health, and loss or gain of these features is important to management of water quality.

- Maintain GIS layers identifying the location of critical systems.
- Evaluate these systems and identify those that are more critical for water protection or would benefit from rehabilitation.
- Mitigation for loss of resources should be required to take place within the watershed where the impact has occurred.
- Measures are needed to ensure that new development reduces the impacts to wetlands and streams and that the day-to-day activities of both residential and commercial uses lessen their impact on the important resources.

C. Improve, restore and prevent further degradation of those resources that are degraded.

The report Assessment of the Biology, Habitat and Chemistry of Streams in the Upper Swift Creek Watershed, Chesterfield County, Virginia (Supporting Document F) presents the physical, chemical and biological water quality data collected by Chesterfield County's Water Quality Section from 2002 to 2005, focusing on the streams of the Upper Swift Creek Watershed. Monitoring information is necessary to assess the overall effectiveness of the water quality management strategies. Information generated from the county's water quality monitoring programs should be used to identify systems, which are in need of restoration or rehabilitation. This information should be used to prioritize those systems so that limited resources may be targeted to areas that would benefit the most.

- Stream and Wetlands Restoration is a collection of methods for improving degraded conditions or preventing the degradation of a stream or wetland. The county should continue to actively pursue compensatory mitigation projects as well as grant funding for stream and wetland restoration.
- Riparian Buffer The Chesapeake Bay Preservation Act requires riparian buffers along streams having perennial flow but does not necessarily address the condition of that buffer or its ability to maintain water quality. As part of a grant, to address the quality of riparian buffers, the county has recently completed an inventory of the riparian buffers within the Upper Swift Creek Reservoir Watershed (Supporting Document G). This inventory focused on the extent and quality of the stream buffer, to include vegetation types and tree canopy coverage. As part of the grant, a new GIS layer has been developed that will facilitate the identification of buffers that would benefit from or require restoration. This knowledge will aid in directing funds and potential grant funding to buffer areas where water quality would benefit the most from buffer enhancement.

Currently, restoration of these features requires cooperation of landowners. While many landowners recognize the benefits of these improvements, placing these environmental features within open space or easements of future development projects will ensure better protection and facilitate future projects.

D. Maintain biological and habitat diversity and promote habitat connectivity by protecting undisturbed land corridors between watersheds and sub-watersheds within the Swift Creek Reservoir Watershed.

As a result of the Resource Protection Area (RPA) regulations, each of the major tributaries within the watershed has a riparian corridor along their banks. However these RPAs do not provide enough land to promote habitat diversity and connectivity between neighboring watersheds.

- Preservation of natural areas within and between residential developments will help maintain connectivity.
- Educational efforts and enhancement of stewardship conservational roles on the part of the homeowners will help the county promote natural diversity and maintain connectivity of habitats.

E. Minimize stormwater runoff through construction site design and site control.

The erosion of land as a result of stormwater flows is detrimental to water quality because of the displaced sediment that is deposited into streams. The deposition of sediment loads is of particular concern during construction activity. Areas under construction are characterized by high production of suspended solids caused by erosion of unprotected, exposed soil during rain events. Excessive pollutant loads can be produced from construction areas if proper erosion-control practices are not implemented. Even with proper implementation of erosion-control practices, as required by the county, Total Suspended Solid (TSS) loads from areas under construction are significantly higher than loads from stabilized areas.

The impacts of this sediment on the receiving waters include: deterioration of aquatic habitat. deterioration of aesthetic value, loss of reservoir storage capacity, and accumulation of bottom deposits that inhibit normal biological life. In addition, sediment is a primary carrier of other pollutants, including phosphorus. In order to understand the impact of sediment runoff from construction sites in the Upper Swift Creek Reservoir Watershed, modeling of two sites was conducted. Using this information it was determined that in a typical year the watershed could see the delivery of 720 to 3,400 tons of sediment inputs from unprotected construction sites. Erosion and sediment controls are predicted to reduce the annual load to between 230 and 1,350 tons per year. If the county can maintain effective erosion and sediment controls, then, in accordance with the predicted association with TSS delivery, approximately 460 to 2,780 pounds per year of phosphorus would reach the reservoir. The Management Plan and updated modeling indicate the required maximum limit in the range between 25,000 and 26,000 pounds of phosphorus per year at projected build out of the watershed. In terms of the annual phosphorus-loading goal, the phosphorus associated with construction sediment is approximately 2 to 11 percent of the annual goal for the reservoir. Without erosion and sediment controls, the range is 1,500 to 6,970 pounds per year, or approximately 6 to 27 percent of the annual goal (see Supporting Document H).

- Erosion and sediment control practices can reduce TSS exported from construction sites by an order of magnitude. It follows that, to protect the Swift Creek Reservoir and its tributaries, particular attention should be paid to the implementation and enforcement of erosion and sediment controls.
- To ensure the protection of water quality, when a project is near or adjacent to sensitive resource features or waterbodies, additional measures that exceed the state minimum standards should be required of development, to include VDOT road projects.

 Monitoring of the watershed tributaries during storm flows would be used to assess the need for additional measures.

F. Promote and encourage development standards for new development and redevelopment that minimize the environmental impact of improvements.

Opportunities exist to promote and encourage new development and redevelopment methodologies using pollution prevention practices, source control measures and reduction of impervious areas. Currently these measures may be considered during the zoning process. With future development, the county should consider the development of ordinances that will consistently apply water quality treatment measures.

- Low Impact Development (LID): LID employs a collection of techniques, which reduce pollutants and controls runoff by mimicking predevelopment site hydrology to store, infiltrate, evaporate and detain stormwater runoff. This control and reduction is achieved by minimizing impervious cover, conserving natural areas, and providing additional distributed stormwater management. The following are examples of LID:
- i. **Biorentention practices** are the development of shallow landscaped depressions that capture runoff and filter it through a prepared soil mix.
- ii. **Stormwater infiltration practices** capture and temporarily store runoff allowing it to infiltrate into the ground over a period of days.
- iii. **Stormwater treatment practices** are a series of structural and non-structural practices that compensate for hydrologic changes related to land development by reducing runoff volume and improving water quality.

By controlling the quality, quantity and velocity of runoff, the health and supply of surface and ground water sources are better protected from the impacts of development caused pollution.

- **Development Site Design:** Better site design minimizes land disturbance, preserves existing vegetation, and minimizes impervious cover through application of a series of development principles. Examples of these principles are outlined below:
- i. **Minimization of clearing and grading** reduces the area exposed to stormwater thereby reducing sediment discharge and the need for additional E&S measures.
- ii. **Reducing pollutants** generated by encouraging designs and containment structures that allow for pollution prevention and spill contingency plans.
- iii. **Remediation or interception** of pollutants by employing, after development, sitespecific treatments of areas that have greater pollution potential
- iv. Tree Save/Preservation/Planting is often not fully recognized for its stormwater benefits. Trees intercept and slow the fall of rainwater, helping the soil to absorb more water for gradual release into water resources. Increasing throughfall area

prevents flooding, filters the water, releases water into the atmosphere, and reduces stress on the stormwater system. Based on these benefits developers should be encouraged to preserve a percentage of each lot or development to remain in a natural state. Additionally, these areas should allow for the green space habitat and wildlife corridors between neighborhoods and sub-watersheds.

G. Promote citizen's group participation and education to aid in the protection of the Swift Creek Watershed.

This goal recognizes the importance of the involvement of citizens to aid in the protection of water quality. Because citizen involvement is important to water quality, the county should encourage citizen groups and individual citizens to engage in activities that improve watershed awareness and active stewardship (i.e. litter clean-up campaigns and buffer management).

 Develop and distribute educational information and sponsor local watershed clean-up initiatives that would result in an overall improvement of the quality of the natural resources with the Upper Swift Creek Region.

H. Promote watershed awareness and stewardship of residents, community associations, businesses and visitors through education programs, recreational opportunities, and participatory watershed activities.

Citizens and businesses privately own the majority of the watershed, including most of its natural resources. Effective private stewardship of the watershed is an integral part of its protection. It is intended to expand the current educational efforts, as required under the county's VSMP permit (Supporting Document I), within the Upper Swift Creek Watershed so as to encourage responsible environmental stewardship at the individual citizen level. As the watershed becomes more urbanized, water quality resources will come under new pressures. Currently, stormwater data from the Brandermill and Woodlake subdivisions indicate elevated levels of nutrient inputs during the Fall and Spring seasons that most likely a result of lawn care. As new residential developments are built, this trend is expected to continue. This data suggests citizens living in the watershed should be educated on nutrient pollution, to include education on the proper techniques for home and lawn care. In addition to educational efforts, the county also promotes active participation in watershed activities such as stream and lake monitoring, riparian buffer planting and stream clean-ups. Passive and active recreational activities, such as hiking and boating, are another way to raise watershed awareness through trails, nature centers and fishing tournaments.

• Education and Outreach (on-going program): Publications and programs should be developed to specifically address the challenges and issues of the Upper Swift Creek Watershed, stressing the importance of protecting the Swift Creek Reservoir as a primary drinking water source. The citizens of this watershed should have a heightened awareness of the watershed in which they live and their personal effects on the water quality. This can be accomplished by working the various audiences. This could include:

Working with the county schools to develop a special curriculum for schools in the USC, develop a county-sponsored volunteer program specifically for watershed residents and to encourage homeowners associations to include water quality measures such as RPA-Buffer

Management and yard maintenance language in their covenants especially for citizens on and around the lake.

- Stormwater Management and Source Controls: For existing developments, identify areas where stormwater maintenance and retrofitting may be possible and necessary to maintain water quality. Develop a mechanism to make funding available to implement these retrofits. Successful retrofit projects will be limited by environmental factors, monetary concerns and public support. Some of the retrofit strategies are outlined below and should also be considered in new development projects:
 - a. Rain barrels and dry wells for citizens' homes and businesses
 - b. Bioretention facilities, where soils permit
 - c. Outfall controls (end of pipe treatments or facilities that divert smaller storms, provide energy dissipation, and/or treatment of stormwater)
 - d. Retrofit culverts and drainage systems
 - e. Retrofit and/or construct stormwater facilities
 - f. Wetland and Stream Channel protection
 - g. Manufactured BMPs (non-residential areas only)

Financial Strategies:

Develop an affordable and effective watershed management plan by devising strategies that build upon existing regulations, programs, and policies, take advantage of established monetary resources, and better target the management budget for more expensive land acquisitions and structural stormwater practices. Increased coordination between agencies with jurisdiction in the watershed, such as VA Department of Transportation (VDOT), County of Powhatan, VA Department of Forestry, VA Department of Environmental Quality, the Army Corp, public utilities, and the county will be more effective in implementation of the watershed plan.

Upper Swift Creek Plan Land Use Categories

(See accompanying Land Use Plan Map)

General Note: Suggested densities of development include all property suggested for such densities regardless of any development limitations that may exist or may be anticipated (such as planned roads or other public facilities, environmental or topographic features, areas suggested on the plan for conservation/recreation, etc.)

General Note: Density of development for residential and non-residential zoning requests that include areas suggested on the plan for conservation/recreation should be calculated on the gross acreage for all property included in the request, including areas suggested for conservation/recreation, based on the recommended densities of the plan.

General Note: The boundaries of conservation/recreation areas depicted on the plan are generalized.

Residential (2.0 or less dwelling units per acre): Residences, places of worship, schools, parks and other similar public and semi-public facilities.

Note 1 on Land Use Plan map: Projects that drain away from Swift Creek Reservoir would be appropriate for densities of up to 2.2 dwelling units per acre.

Office/Residential Mixed Use: Professional and administrative offices and residential developments of varying densities. Supporting retail and service uses would be appropriate when part of a mixed use center of aggregated acreage under a unified plan of development. (Equivalent zoning classifications: R (various), O-2)

Note 4 on the Land Use Plan map: Regional mixed use may be appropriate in the northwest quadrant of the Route 288 /Hull Street Road interchange, based on existing, planned and/or proffered road improvements, as well as provision of adequate design standards to address land use transitions, design compatibility, visibility from area roads, etc.

Deferred Growth: Primarily limited to agricultural and forestall uses, isolated single-family residences on large parcels, places of worship, and other similar semi-public facilities. Other types of development, including public facilities such as public schools and parks, as well as the extension public water and wastewater services, should be deferred until the plan is amended through a subsequent review. (Equivalent zoning classification: A)

Community Mixed Use: Community scale commercial uses, including shopping centers, and service and office uses that serve community wide-trade areas. Residential uses of various types and densities may be appropriate if part of a larger mixed-use project and the design is integrated with other uses. (Equivalent zoning classification: C-3)

Note 2 on the Land Use Plan map: Community Mixed Use Node: Community scale commercial uses including, but not limited to, shopping centers, service and

office uses that serve community wide trade areas. Residential uses of various types and densities may be appropriate if part of a larger mixed use project and the design is integrated with other uses. The size and location of centers, and the mix of uses, should be determined in part by market area, availability of adequate access to the transportation system, and availability and suitability of land. In general, however, community-scale mixed use centers should be located at the intersections of major arterial roads. Intersections should be analyzed to determine which quadrant is best suited (through detailed analysis of land assembly, access or impact on residential uses) for a center, and the center should be located only on the superior site. Commercial uses should be located at one corner of the intersection and be surrounded by office and residential use transitions. (Equivalent zoning classification: C-3)

General Business Mixed Use: General commercial uses including, but not limited to, automobile-oriented uses and light industrial uses. (Equivalent zoning classification: C-5)

Note 6 on the Land Use Plan map: Properties not currently zoned for General Business Mixed Use should, at the time of zoning, be aggregated to sufficient acreage to ensure that development is oriented away from area roads.

Regional Mixed Use: Integrated office, regional commercial, higher density residential and light industrial park uses incorporated into a mixed use center of aggregated acreage under a unified plan of development. (Equivalent zoning classifications: C-4, I-1)

Note 3 on the Land Use Plan map: Outside storage might be appropriate in this area if such outside storage is oriented internal to a project and away from roads.

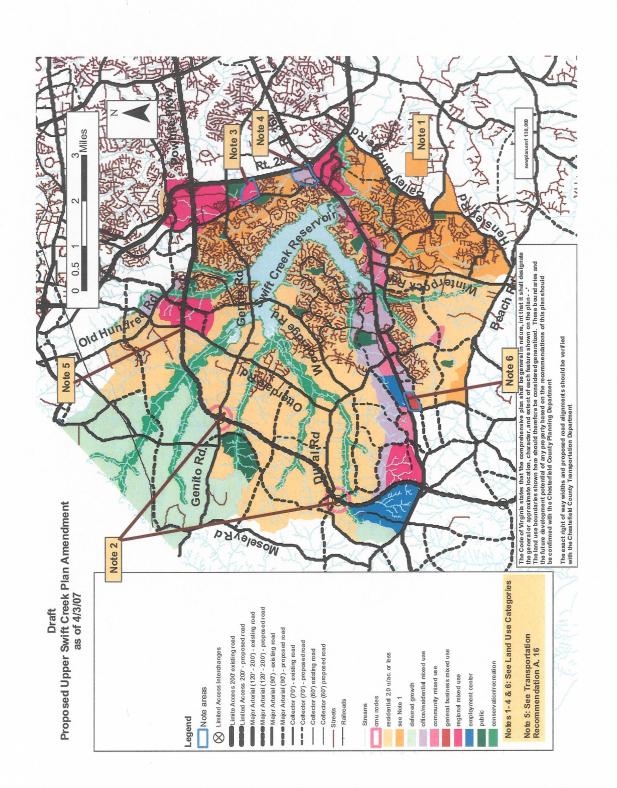
Employment Center: Integrated corporate office, research and development, and light industrial uses on acreage of sufficient size to allow a unified plan of development. Moderate industrial uses may be appropriate when designed, located and/or oriented to ensure compatibility with less intense uses, and where appropriate access and transitions are provided. Retail and service uses that serve primarily surrounding employment center uses may be appropriate when part of a larger industrial and/or office development. The scale and mix of such retail and service uses should be proportionate to the needs of the primary employment center uses and should not be built until the employment center uses have developed to a density sufficient to support such retail and service uses, without such retail and service uses having to rely on larger markets for financial success. (Equivalent zoning classifications: I-1, I-2, O-2)

Convenience Commercial (not shown on Plan): Small scale uses, such as limited retail and personal services, when located within planned residential areas and designed to attract customers primarily from immediate neighborhoods only. Typically, such uses should: be planned in conjunction with residential projects in order to insure compatibility; be limited in size and acreage; be located at the intersections of collector streets, or between residential neighborhoods and higher intensity uses and/or arterials; and provide transitions through consideration of appropriate uses, building scale, architecture and site design. Such areas require detailed analysis to ensure compatibility; therefore, individual locations cannot be depicted on the Land Use Plan map. (C-1)

Public: Significant publicly owned properties (county, state and federal), including schools, parks, cemeteries and other public facilities, as well as publicly owned vacant

land. Should such land be redeveloped for other uses, the appropriate uses would be those that are compatible with surrounding existing or anticipated development, as reflected by existing land uses, zoning, and/or the recommended land uses on the adopted comprehensive plan.

Conservation/Recreation: Lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may cause significant degradation to the quality of state waters. Recommended land uses are those in conformance with the Chesapeake Bay Preservation Area, Upper Swift Creek Watershed, and other environmental provisions of the Chesterfield County Zoning Ordinance. Where appropriate, some areas may be suitable for limited pedestrian and bicycle trails, or for other passive recreation activities.



Supporting Document A

(Revised & updated: 4/3/07)

<u>Upper Swift Creek Plan Amendment</u> Existing Conditions and Issues

A. Plan Boundaries

The boundaries of the <u>Upper Swift Creek Area Plan</u> are the <u>Route 288 Corridor Plan</u> to the north, the <u>Southern and Western Area Plan</u> and <u>Central Area Plan</u> to the south, <u>Powhite/Route 288 Area Plan</u> the to the east, and Powhatan County to the west. A small portion of the adopted <u>Upper Swift Creek Plan</u> lies north of Midlothian Turnpike and east of Route 288, and is physically separated from the bulk of the <u>Upper Swift Creek Plan</u> by the Route 288 Corridor Plan.

B. Magisterial Districts

The <u>Upper Swift Creek Plan</u> lies within the Matoaca Magisterial District (about 82 percent of the study area geography), within the Clover Hill Magisterial District (about 14 percent of the study area geography), and within the Midlothian Magisterial District (about 4 percent of the study area geography).

C. Plan Status

The study area of this plan amendment includes most of the geography of the current <u>Upper Swift Creek Plan</u> (adopted in 1991). That small portion of the 1991 plan physically separated from the study area by the <u>Route 288 Corridor Plan</u> is not included in the geography of this plan amendment, but will be included in the <u>Robious Area Plan</u> amendment currently under review. The study area includes the majority of the Upper Swift Creek watershed within the jurisdiction of Chesterfield County. The geography of the plan amendment is approximately 57 square miles in area, comprising approximately 13 percent of the land area of the county.

D. Existing Zoning and Land Use Patterns

Existing zoning and land use patterns within the study area reflect predominantly a mix of residential and agricultural zoning and uses. Most of the area's commercial zoning and uses are located along Rt. 360. Rt. 360 provides a major east/west vehicular access, linking the study area with the rest of the county to the east and with Amelia County to the west. Route 288 provides a major north/south vehicular access, linking the study area with the rest of the county to the north and south as well as access to Powhatan and Henrico Counties to the north. Powhite Parkway provides additional major vehicular access to the northeast portions of Chesterfield County and to the City of Richmond. Planned improvements to Powhite

Parkway will further enhance vehicular access between the study area and the surrounding region.

As noted herein, the study area includes the majority of the Upper Swift Creek Watershed that lies within the jurisdiction of Chesterfield County. This watershed supplies Swift Creek Reservoir, currently a significant source of drinking water for the county and a major amenity for area residents.

As of December 31, 2006, approximately 45 percent of the study area was zoned agriculturally, of which 60 percent had minimal improvements. Residential zoning accounted for approximately 47 percent of the land within the study area, of which 58 percent was minimally improved. Office, commercial and industrial zoning accounted for about 8 percent of the area, of which 65 percent had yet to be developed.

Residential zoning within the study area, as a percentage of overall zoning, is higher than the countywide average (47 percent for the study area compared to 35 percent countywide). The overall density for residential development is about the same as that for residential development in the county as a whole.

The study area includes existing and planned residential neighborhoods of varying ages and character, including: single family residences (including mobile homes) on acreage parcels; single family residences in subdivisions; townhouse subdivisions; and multi-family dwellings.

An examination of land use data identified 16,186 dwelling units within the study area as of December 2006. The 2006 data also suggests that there was enough vacant land already zoned for residential use within the study area to permit the development of an additional 15,256 dwellings. Under the current adopted plan, 19,652 more dwellings could also potentially be built on agriculturally zoned vacant land recommended by the plan for residential development, for a potential adopted plan build-out total of about 51,094 dwellings (a 215 percent increase over the number of dwellings in 2006). Analysis of the proposed <u>Upper Swift Creek Plan</u>, projects a total of

43,434 dwellings by plan build-out, not including any subsequent development in the recommended deferred growth area.

Significant public/semi public uses within the study area include: Horner Park; Clover Hill Library; Alberta Smith, Clover Hill, Spring Run, Swift Creek, and Woolridge Elementary Schools; Swift Creek Middle School; Clover Hill and Cosby High Schools; a temporary policing station; Clover Hill and Swift Creek Fire Stations; and Manchester Volunteer Station. Harpers Mill Elementary School is under construction. Semi-public uses include area churches, a private school (Millwood School), and golf courses. Swift Creek Reservoir provides a visual amenity to the public - however, access to the Reservoir for recreational purposes is restricted and generally not available to the public at large.

E. <u>Demographic Information</u>

The following information comes from 2000 Census data and Chesterfield County's land use database for 2006 (through December 31, 2006), together with additional information on population and housing gathered from county assessment records and studies.

1. Population

A review of Chesterfield County's Land Use database for 2006 suggests that the number of people living in the study area increased between January 1, 1994 and December 31, 2006, from approximately 27,900 to approximately 42,375, or an increase of about 52 percent. Estimates of countywide population growth for the same time period indicate that county population grew by about 35 percent. Most of this population growth has occurred in new subdivisions developing west of Woodlake and south of the Rt. 360 commercial corridor, as new households continue to move into the area.

The study area population estimate represents approximately 14 percent of the county's estimated total population for 2006. Given that the study area includes approximately 13 percent of the area of the county, the population density of the study area is comparable to that for the county as a whole.

2. Household Income

The 2000 Census year estimated household income for census tracts that encompass the study area was approximately \$71,682, or approximately 122 percent of the Chesterfield County average of \$58,537 for the 2000 Census year.

3. Housing

The study area has a mix of older and newer neighborhoods and a mix of housing types. The average assessment of single-family residences in 2006 was \$264,295, compared to a county average of \$227,347. The average age of residences was estimated to be about 16 years, compared to a county average of 24 years.

4. Residential Development Patterns

Residential development within the study area is characterized primarily by single-family residences on acreage parcels, by single-family and townhouse residences in subdivisions, and by apartments and condominiums in multi-family complexes. The following generally summarizes residential development within the study area:

• Single-family residences on acreage parcels front most of the arterial roads in the western and southern fringes of the study area.

- Single-family and townhouse residences in subdivisions include a mix of older and newer neighborhoods, with most new single-family subdivisions developing west of Woodlake and south of the Rt. 360 commercial corridor.
- Several multi-family complexes are within the study area. These are primarily located along, or in proximity to Rt. 360, and within, and north of, Brandermill and Woodlake.

F. Commercial Development Pattern

Commercial uses within the study area consist primarily of businesses on parcels fronting Rt. 360, with a significant node of commercial, office and industrial development in the vicinity of the Gentio Road/Old Hundred Road intersection.

G. Employment and Jobs

In the second quarter of 2003, approximately 19,448 employed persons resided in the study area. During the same period area businesses generated approximately 7,182 jobs. These estimates suggest the study area is a net exporter of workers, by a ratio of about 2.7 workers living in the area per job within the area.

H. Tax Revenue

It is difficult to obtain information about tax revenue generated for specific geographies of the county. However, a review of county assessment data for land and improvements (December 31, 2006) suggests that the study area is a net generator of real estate tax revenue. Specifically, county assessment records indicate that land and improvements within the study area account for approximately 16 percent of total assessed taxable value countywide. As noted herein, the population of the study area is approximately 13 percent of countywide population estimates. These estimates suggest that the study area generates slightly more per-capita real estate tax revenue than that generated countywide.

A further analysis of real estate assessment records suggests that approximately 10 percent of the county's assessed value for all office, commercial and industrial improvements (exclusive of land value) are located in the study area. This might suggest that 10 percent of the office, commercial and industrial development of the county is located in the study area, which, as noted herein, includes 13 percent of the county's land area and 14 percent of the county's population.

I. Environmental Features

As noted herein, the study area includes most of the Upper Swift Creek Watershed and Swift Creek Reservoir. The Swift Creek Reservoir is approximately 1700 acres in surface area and serves as a source of water for Chesterfield County citizens. The reservoir also supports fish and other aquatic life. In addition to the reservoir, there are tributary streams and adjacent wetlands in the study area. There are also non-tidal

wetlands throughout the study area that are not associated with any of the streams or the reservoir.

The complex of streams and wetlands in the watershed provide wildlife habitat, support aquatic life, serve as a recreational resource and add to the aesthetics of the study area. The tributary streams also have floodplains and Resource Protection Areas (RPAs) adjacent to them (approximately 14 percent of the study area). The floodplains and RPAs protect the streams by filtering out pollutants in stormwater runoff. These areas are identified in the Water Quality Protection Plan as environmentally sensitive features, and land uses and activities within them are limited by county ordinance. Additional environmentally sensitive areas may exist in the study area; however, these areas have not yet been calculated. Further analysis of these features would occur with new development.

The study area is generally characterized by flat to gently rolling topography typical of the Piedmont and Triassic physiographic regions. Soils in the area can be characterized as moderately to well drained. There are some areas, however, that have clayey or hydric soils, which do not drain well. Significant slopes and erodible soil conditions exist along some stream banks.

J. Utilities

Public Water and Wastewater Service

The area encompassed by the Upper Swift Creek Plan amendment is supported by public water and wastewater infrastructure that has been planned to accommodate future growth while maintaining quality service for existing residential, commercial and industrial areas.

Water System

The County's public water system is an interconnected system which draws treated water from three sources: the Swift Creek Reservoir, the City of Richmond, and the Appomattox River Water Authority (ARWA) at Lake Chesdin. While the amount of water taken from Swift Creek Reservoir is anticipated to remain at a constant rate, existing long-term contracts with the City of Richmond and the ARWA insure that sufficient water will be available to meet the domestic and fire protection demands of future as well as existing development in the Upper Swift Creek watershed. The existing water system consists of transmission and distribution lines, booster pump stations and elevated storage tanks.

The County's Water and Wastewater Facilities Plan reflects that development in the upper portion of the Upper Swift Creek Plan amendment area will be served by water line extensions from an existing 24" line along Rt. 60, and by the existing Huguenot Springs and Midlothian tanks. Water lines will need to be constructed along Old Hundred Road, Otterdale Road north of Genito Road, and Mt. Hermon Road. Development in the central

and lower portion of the Plan area will be served by extensions from existing 24" lines along Rt. 360 and Spring Run Road, by existing 16" lines along Winterpock Road, Genito Road and Woolridge Road, and by the existing Clover Hill and Physic Hill tanks. Water lines will need to be constructed along Rt. 360 west of Hampton Park Boulevard, DuVal Road, and Genito Road west of Otterdale Road. It is anticipated that those lines will be constructed by private developers.

The County's Water and Wastewater Facilities Plan reflects a future water tank west of Otterdale Road, between DuVal Road and Genito Road, and on Rt. 360 in the vicinity of Grange Hall elementary school. The Water and Wastewater Facilities Plan also reflects future construction of the "Southwest Corridor Transmission Line", which will begin at the ARWA treatment plant at Lake Chesdin, follow River Road to Riverway Road, run along Riverway Road to Beach Road, run east along Beach Road to the future Otterdale Road Extended, run along Otterdale Road Extended through the Southern Land Sales tract, and connect to a future water line along Rt. 360, west of Winterpock Road. This transmission line, along with two new pump stations and a ground storage tank, will move water from the ARWA facility into the western Rt. 360 corridor, will feed the future "Grange Hall" tank, and will support existing development as well as future growth reflected by the Upper Swift Creek Plan.

Wastewater System

The "backbone" of the public wastewater system that serves the <u>Upper Swift Creek Plan</u> area is the Upper Swift Creek Transport System, which was completed in 1990. This facility includes a 60" diameter trunk along Genito Road at the upper end of Swift Creek Reservoir, the Upper Swift Creek Wastewater Pump Station located north of Genito Road at the mouth of Little Tomahawk Creek, and dual force mains which convey wastewater east to the Bailey's Bridge Road Wastewater Pump Station. At the present time a single force main conveys wastewater from that location east to the Proctors Creek Wastewater Treatment Plant. The County's Water and Wastewater Facilities Plan includes future expansion of the Upper Swift Creek pump station, replacement of the Bailey's Bridge Road pump station with a much larger facility, and construction of two additional force mains to convey wastewater to the treatment plant. Construction of the new Bailey's Bridge Road pump station and the additional force mains began in early 2004 and completion is projected for late 2005. These system upgrades will insure that adequate capacity will be available in the downstream facilities to support future growth reflected by the Upper Swift Creek Plan.

The <u>Water and Wastewater Facilities Plan</u> reflects future large wastewater lines that will be necessary along Swift Creek, Tomahawk Creek, Otterdale Creek, Horsepen Creek, and Blackman Creek. Extensions of existing wastewater lines along West Branch Creek, Spring Run Creek, Dry Creek, and Fuqua Branch Creek will also be needed. It is anticipated that those lines will be constructed by private developers.

The Upper Swift Creek Transport System was designed and constructed to support future development in the Upper Swift Creek watershed based on the higher land use densities

as reflected in the Powhite/Route 288 Development Area Plan, which predates the Upper Swift Creek Plan. With adoption of the Upper Swift Creek Plan in 1991, and the subsequent plan amendment in 2000, significantly lower residential development densities were recommended, which have been consistently followed for developments approved by the County over the past thirteen years. These lower densities have made available a limited amount of system capacity within the Upper Swift Creek Transport System, which is not anticipated to be utilized by development within the Upper Swift Creek watershed. Future extensions of wastewater lines needed for development of the Magnolia Green site will be oversized to include that additional capacity. Future lines constructed within Magnolia Green, along Blackman Creek and its tributaries, will also be oversized to include the additional capacity, and will provide access points for a very limited area along the south side of Rt. 360, at the southeast and southwest quadrants of the future Powhite Parkway interchange. This area is in the upper end of the Appomattox River watershed. Development in this limited area would require the construction of one or two strategically placed pump stations, with force mains extending across Rt. 360, in order to access the public wastewater system and utilize that additional system capacity.

Creation of Water and Wastewater Assessment Districts

The County does not have funds appropriated for the extension of public water and wastewater service into areas of existing development. Since 1989 the County's policy to address requests for service has been to pursue the creation of "assessment districts". If the majority of property owners in a specific area desire public water and/or wastewater service the Board of Supervisors may hold a public hearing, and consider the creation of an assessment district. If approved, the Board will appropriate the funds for that specific project and all owners, whose property abut the utility line, will be assessed a share of the total project costs as a means of reimbursing the County. The assessment will be recorded as a lien on the property, and the owners can pay the assessment in one lump sum payment, or choose bi-annual payments for up to a 20-year period. Property owners aged 65 years or older who occupy a dwelling on their property may request that their assessment payments be deferred until such time as the dwelling is no longer occupied by an owner aged 65 or older, or is sold or otherwise conveyed to another person. At that time the suspension of payments would cease, and the entire assessment, plus any accrued interest would be due.

K. Police Service

There is a temporary police precinct serving the area. It is anticipated that this facility will become permanent by 2007 - 2008. The need for additional police service facilities is addressed in the <u>Public Facilities Plan</u>, which was updated in 2004.

L. Fire Service

There are two fire stations and one volunteer station within the study area. The need for additional fire service facilities is addressed in the <u>Public Facilities Plan</u>, which was updated in 2004.

M. Schools

The study area lies within the Alberta Smith, Clover Hill, Evergreen, Grange Hall, Spring Run, Swift Creek, Watkins and Woolridge Elementary School zones, the Bailey Bridge, Midlothian and Swift Creek Middle School Zones, and the Clover Hill, Manchester and Midlothian High School zones. Cosby High School opened in 2006 – 2007. Harpers Mill Elementary School is scheduled to open in 2007 – 2008. The need for additional school facilities is addressed in the Public Facilities Plan, which was updated in 2004.

N. <u>Libraries</u>

The study area is served by the Clover Hill and Midlothian Libraries. The need for additional library facilities is addressed in the <u>Public Facilities Plan</u>, which was updated in 2004.

O. Parks and Recreation

Horner Park and the Clover Hill Athletic Facility are located within the study area. The need for additional park facilities is addressed in the <u>Parks and Recreation Master Plan</u> and <u>Public Facility Plan</u>, which was updated in 2004.

P. Transportation

Route 360 provides the major east/west vehicular access route in the study area, linking the area with the rest of the county to the east and with Amelia County to the west. Route 288 provides the major north/south vehicular access route in the study area, linking the study area with the rest of the county to the north and south, and also provides major vehicular access to Powhatan and Henrico Counties to the north. Powhite Parkway provides additional major vehicular access to the northeast areas of Chesterfield County and to the City of Richmond. Planned improvements to Powhite Parkway will further enhance vehicular access between the study area and the surrounding region.

Continued development in the western portions of the county is putting pressure on the existing road network to accommodate increased traffic from new residents and businesses moving into the area.

Roads in the western part of the Upper Swift Creek Plan area mainly consist of substandard two-lane roads (ie. pavement width less than 24 feet, with shoulders of less than 2 feet in width). Most of these roads are currently carrying relatively low volumes of traffic. Sections of Genito Road, Woolridge Road, Mount Hermon Road, Duval Road, Otterdale Road, Hallsboro Road, and County Line Road are narrow, with no shoulders, and poor vertical and horizontal alignments. Based on the most recently available traffic counts, most of these roads are carrying less than 2,000 vehicles per day.

In the eastern part of the plan area, substandard two-lane roads are carrying significantly higher volumes of traffic. Bailey Bridge Road in the vicinity of Manchester High School and Bailey Bridge Middle School currently carries approximately 8,700 vehicles per day. Genito Road east of Woolridge Road carries 13,605, Woolridge Road carries 10,800 over the Swift Creek reservoir, and Old Hundred Road north of Millridge Parkway carries 11,135. These volumes approach or exceed the capacity of these facilities.

The following Tables list the most recent Average Daily Traffic (ADT) volumes on Primary and major Secondary roads in the Plan area:

PRIMARY ROUTES - TRAFFIC VOLUME HISTORY Upper Swift Creek Plan Area Updated: May 2005

Fical	100.00	Court cocated Setween	2001	200	2003		2005
Powisto Parkets	76	Rose State Charter Control Steway			20,461	20,000	-
Rouse 288	288	Courtscope Rose and Hull Street Rose	25,704	-	35,701	38,000	
Route 288	288	Hull Street Road and Powrito Parkway	26,646		34,484	37,000	
Route 288	286	Powrite Personay and Lucks Leve	2	-		-	-
Route 288	298	coss care and Wooldge Road	-	-	100	16,000	
Route 288	288	Washings Rose and Midelman Tumpke		-	-	16,000	-
Route 288	286	Michelber Turnoke and Rossous Road		-	_	-	
Rouse 288	288	Robous Road to James River Bridge		-			35,898
Hull Street Road	360	Appenditor River and Sking cater Road	-	14,000	18,020	16,000	
Hull Street Road	360	Storquarter Point and Woodlake Parkers	-	20,000	22,353		-
Hall Street Road	360	Woodske Parkway and Winterpork Road	44,110	-	44,941	-	
Hull Street Road	360	Antonios Asserbis Dirikantini Ross	61,549	-	68,999	-	-
Hull Street Road	360	Cod Humbood Road and Roads 268	52,491	52,000	_	-	-

Secondary Road Traffic Volumes

Upper Swift Creek Plan Area Updated: August 2005

Road	He I	Control Service	2000		2002	2003	2004	2005
Balley Bridge Rd	654	Caypoint and Schools	8,045	-	11,746	10,819	-	-
Balley Bridge Rd	654	Schools and Deer Run Drive	5,575	-	-	6,801	-	8,688
Barry Bridge Rd	654	Deer Run Drive and Spring Run	3,080	-	-	3,453	-	-
Seach Road	655	Winterpock and Coalboro	1,217	-	1,000	1,300	-	-
Beach Road	655	Coattors and Beaver Bridge	553	-	510	985	-	-
Charter Colony Parkway	754	Mineral Trail & Provinte People	17,694	-	-	na	-	-
Charter Colony Parkway	754	Pownite Pkwy and Genilo	-	21,572	19,000	21,410	-	-
County Line Road	606	Mount Hermon and Helioboro	215	-	-	-	-	228
County Line Road	671	Halleboro & Michelman Toke	-	-	-	670	-	-
Duval Road	668	Otherdale and Skinguarter	-	-	-	240	-	-
Genito Road	604	Various and Charter Colony Perway	-	-	13,376	-	-	-
Genito Road	604	Charter Colony & Branderfold Psey	14,481	-	-	-	-	-
Genito Road	604	Brandernol Pkwy & Woonings	10,838	-	11,227	13,603	-	-
Gento Road	604	Woolings and Otterdate	3,759	-	-	5,372	-	4,937
Gento Roso	604	Oberage and Mount Hermon	3,225	-	-	2,390	-	2,947
Gento Road	604	Mount Hermon and Moseley	2,142	-	-	4,483	-	-
Gento Road	604	Moseley and W County Line	-	-	-	1,679	-	-
Hallsboro Road	671	County Line Rd & Mil Hermon	-	-	-	290	-	-
Happy Hill Road	619	Branders Bridge & Harrowgale	2,949	-	3,200	2,648	-	-
Happy Hill Road	619	Harrowgate and S Chester	4,779	-	-	5,106	-	-
Happy Hill Road	619	S Chester and Pheasant Run	3,718	-	-	3,976	-	-
Hensley Road	669	Spring Run and Soccer Complex	-	-	-	950	-	-
Moseley Road	605	Genito and West County Line	466	-	470	440	-	_
Mount Hermon Rd	606	Genticand County Line Road	-	-	-	240	-	-
Mount Hermon Rd	671	County Line Rd & Hallsboro	182	-	-	-	-	207
Mount Hermon Rd	684	Hassbero and Old Hundred	-	-	-	420	-	-
Old Hundred Rd	652	Dry Bridge and Offerdale	4,662	-	5,802	5,831	-	-
Old Hundred Rd	652	Otterdale & Brandermill Pkwy	5,659	-	6,301	7,067	-	-
Old Hundred Rd	652	Brandern ii Pkwy & Pownie Pkwy	-	-	-	15,605	-	
Old Hundred Rd	754	Gento and Milindge Parkway	8,391	-	11,135	-	-	
Old Hundred Rd	754	Milnage Pkwy and Hull Street Rd	13,859	-	-	-	-	-
Otterdale Road	667	Midlothian and Old Hundred	1,356	-	-	1,209	-	1,100
Otterdale Road	667	Old Hundred and Genito	998	-	1,155	1,090	858	-
Otterdale Road	667	Genito and Dovel	-	-	-	1,059	-	-
Otterdale Road	667	Doval and Woolndge	-	-	1,100	1,282	906	-
Otterdale Road	667	Woolndge and Hull Street Rd		-	1,885	1,855	2,853	-
Spring Run Road	702	Hull Street Road & McEnnally	-	-	-	6,495	-	-
Spring Run Road	662	McErnally and Balley Bridge	-	-	-	4,284	-	7,083
Spring Run Road	654	Balley Bridge and Hensley	4,293		-	4,955	-	
Winterpock Road	621	Hull Street Road and Bethia	-		-	9,154	10,792	
Winterpock Road	621	Bethia and Beach	7,139		-	-	7,886	
Woolnage Road	668	Offerdate Road to Foxeroft	829	1,094	1,121	1,328	1,553	
Woolnage Road	668	Imber Buff Pkwy & Crown Point	8,062	7,942	-	9,806	10,143	10,937
Woolnage Road	668	Crown Point & Gento Road	-	-		<u> </u>	<u> </u>	10,802

There are several roads in the plan area that have no shoulders, and that currently carry 4,000 or more vehicles per day. To accommodate this existing volume of traffic, these roads should be improved to 24 feet of pavement, with an eight foot paved shoulder, with vertical and horizontal alignments improved as necessary.

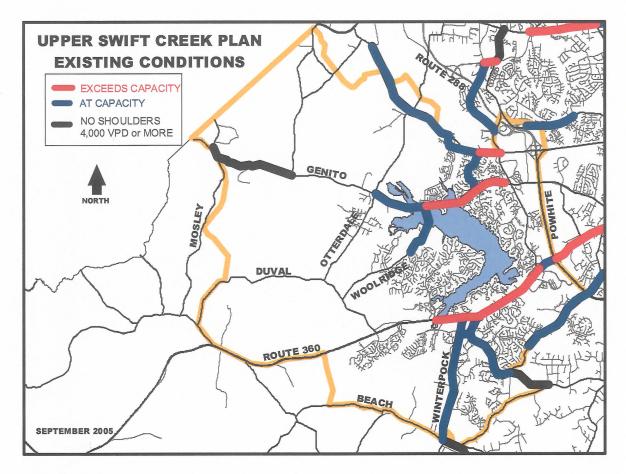
The following Table lists Levels of Service on roads in the Plan area, calculated using the most recent available data. Level of Service "E" represents roads that are currently at capacity. Level of Service "F" represents roads carrying traffic volumes that exceed the ideal capacity of the road (also see the attached map).

Upper Swift Creek Plan

Primary and Secondary Road Levels of Service
Updated: September 2005

	******************************		#of	Lalest	Level of
Road Name	Rte#	Count Located Between	Lanes	ADT	Service
Powhite Parkway	76	Route 288 and Charter Colony Pkwy	4	20,461	В
Route 288	288	Courthouse Road and Hull Street Road	4	35,701	В
Route 288	288	Hull Street Road and Powhite Parkway	4	34,484	В
Hull Street Road	360	Skinquarter Road and Woodlake Pkwy	4	22,353	Α
Hull Street Road	360	Woodlake Pkwy and Winterpock Road	4	44,941	F
Hull Street Road	360	Winterpock Road & Old Hundred Road	4	68,999	F
Hull Street Road	360	Old Hundred Road and Route 288	6	52,000	E

			# of	Latest	Level of
Road Name	Rie#	Count Located Between	Lanes	ADT	Service
Bailey Bridge Road	654	Claypoint Road & Schools Entrance	2	10,819	E
Bailey Bridge Road	654	Schools Entrance and Deer Run Drive	2	8,688	Е
Bailey Bridge Road	654	Deer Run Drive and Spring Run Road	2	3,453	D
Baldwin Creek Road	730	Hull Street Road and Beach Road	2	911	В
Beach Road	655	Riverway Road and Winterpock Road	2	5,460	D
Beach Road	665	Winterpock Road and Coalboro Road	2	1,300	В
Beach Road	655	Coalboro Road & Beaver Bridge Road	2	985	В
Brandermill Pkwy	1921	Genito Road and Powhite Parkway	2	7,970	E
Charter Colony Pkwy	950	CentrePointe and Powhite Pkwy	4	17,694	В
Charter Colony Pkwy	950	Powhite Pkwy and Genito Road	4	21,410	С
County Line Road	606	Mount Hermon Road & Hallsboro Road	2	228	Α
County Line Road	671	Hallsboro Road & Midlothian Tpke	2	635	В
Duval Road	668	Otterdale Road & Skinquarter Road	2	240	Α
Genito Road	604	Warbro Road & Charter Colony Pkwy	4	13,376	Α
Genito Road	604	Charter Colony Pkwy & B'mill Pkwy	2	14,675	F
Genito Road	604	Brandermill Pkwy & Woolridge Road	2	13,603	F
Genito Road	604	Woolridge Road and Otterdate Road	2	4,937	Е
Genito Road	604	Offerdale Road & Mount Hermon Road	2	2,947	D
Genito Road	604	Mount Hermon Road & Moseley Road	2	4,483	D
Genito Road	604	Moseley Road and West County Line	2	1,679	С
Hallsboro Road	671	County Line Road & Mt Hermon Road	2	165	Α
Hensley Road	659	Spring Run Road and Soccer Complex	2	2,105	С
McEnnally Road	702	Winterpock Road & Spring Run Road	2	2,753	E
Moseley Road	605	Genito Road and West County Line	2	440	В
Mount Hermon Rd	606	Genito Road and County Line Road	2	220	В
Mount Hermon Rd	671	County Line Road & Hallsboro Road	2	207	Α
Old Hundred Road	652	Dry Bridge Road and Otterdale Road	2	5,831	E
Old Hundred Road	652	Otterdate Road & Brandermill Pkwy	2	7,067	E
Old Hundred Road	754	Brandermill Pkwy & Powhite Pkwy	2	15,605	F
Old Hundred Road	754	Genito Road and Millridge Pkwy	2	10,373	D



There are several roads in the plan area that are in the State highway system that are currently unimproved/unpaved:

- 1. <u>Route 796 (Chesterfield Baptist Church on Hull Street Road)</u> no count available on short unpaved section
- 2. <u>Ledo Road (Route 795 north of Hull Street Road)</u> no count available on short unpaved section
- 3. <u>Lacy Farm Road (Route 729 east of Moseley Road)</u> 96 vehicles per day in 2005
- 4. <u>Scottwood Road (Route 670 west of Old Hundred Road)</u> 71 vehicles per day in 2003

In order to qualify for paving with State funds, these roads must be carrying a daily traffic volume of over 50 vehicles per day. Actual paving of roads that qualify would be dependent on the availability of funding.

The following Table shows the number of reported traffic accidents in the plan area in 2002, 2003, and 2004. Accidents are listed by severity (Fatality/Injury/Property Damage only), and by type.

Traffic Accident Statistics - Reported Crashes

2002, 2003, and 2004

(Accident statistics provided by the Chesterfield County Police Department)

Type of Accident	2002	2003	2004	Totals
Fatality	6	4	5	15
Injury	156	186	209	551
Property Damage Only	588	675	671	1,934
Total reported accidents	750	865	885	2,500

Type of Accident	2002	2903	2004	Totals	Percent
Rearend	283	327	310	920	36.8%
Fixed Object/Off-road	153	173	205	531	21.2%
Angle	145	165	. 171	481	19.2%
Sideswipe - Same Direction	42	50	56	148	5.9%
Sideswipe - Opposite Direction	30	31	26	87	3.5%
Head-on	3	27	8	38	1.5%
Bike/Pedestrian	3	4	2	9	0.4%
Deer/Other Animal	42	50	36	128	5.1%
Other	49	38	71	158	6.3%
Total reported accidents	750	865	885	2,500	100.0%

The Upper Swift Creek Plan area includes one of the most highly congested road corridors in the County. Drivers on Hull Street Road (State Route 360) between Woodlake Village Parkway and Swift Creek experience extensive travel delays during several hours of the day, and especially during the morning and afternoon rush hours.

Virginia's Surface Transportation Assistance Act (STAA) Truck Routing Map designates Hull Street Road, Route 288, and Powhite Parkway as "Non-Interstate Qualifying Highways". This designation allows oversize vehicles and tandem trailers to use these roadways. Hull Street Road is a major regional east/west truck route. Recent traffic data provided by VDOT indicates that trucks make up approximately 8 percent of the daily traffic volume on Hull Street Road.

The Virginia Department of Transportation (VDOT) Six-Year Improvement Program includes a project to widen Route 360 to six (6) and eight (8) lanes from Winterpock Road to Swift Creek. Widening of the westbound lanes was scheduled to begin in 2005; however, after two advertisements, bids received were too high. Staff hopes the project will be under construction next year. Additional funding for the second phase, widening of the eastbound lanes, is identified in the FY08 and FY 09 years of the current Program. This second phase is included in the recent county bond referendum. The county hopes to accelerate the project and have it under construction by Spring 2006.

Additional projects in the Plan area include:

- 1. A project to reconstruct two substandard curves on Spring Run Road between McEnnally Road and Bailey Bridge Road. Construction is scheduled to begin in Fall 2007.
- 2. A project to improve two substandard curves on Bailey Bridge Road. The county is managing these projects. Construction is anticipated to begin in Summer 2006.
- 3. A project to reconstruct Bailey Bridge Road as a two-lane road from Claypoint Road to Manchester High School. The project is not anticipated to begin until Spring 2010.
- 4. A project to make spot safety improvements on Woolridge Road south of Crown Point. The county was successful in obtaining federal safety funds for this location. Construction is expected to begin in 2008.
- 5. A project to add a fourth westbound lane on Hull Street Road from Route 288 to Old Hundred Road/Commonwealth Center Parkway. Construction is planned for Spring 2006.

The section of Woolridge Road that crosses the Swift Creek Reservoir is not currently in the State Highway System. This is one of a relatively few major Secondary roads in Chesterfield County that are not maintained by VDOT. Maintenance of this short section of roadway is the responsibility of Chesterfield County.

VDOT assigns a "Sufficiency Rating" to major culvert and bridge structures based on several factors, including structural adequacy, functional obsolescence, and essentiality for public use. If the Sufficiency Rating for a culvert or bridge is less than 80, but more than 50, the structure is eligible for rehabilitation funding. A structure rated less than 50 qualifies for rehabilitation or complete replacement.

Based on information provided by VDOT, four structures in the plan area are rated between 50 and 80:

- 1. Woodlake Village Parkway (70.0) over West Branch Creek, north of Village Square Parkway
- 2. Old Hundred Road (65.0) over Nuttree Branch, between Brandermill Parkway and Millridge Parkway
- 3. Otterdale Road (52.1) over Otterdale Branch, just south of Genito Road
- 4. Mount Hermon Road (50.7) over Swift Creek, just south of County Line Road

Two are rated at less than 50:

- 1. Genito Road (41.6) easternmost structure over Swift Creek Reservoir
- 2. Genito Road (29.3) westernmost structure over Swift Creek Reservoir

In addition, there are several bridges within the plan area that have vehicle weight limits, which restricts their use by heavy truck traffic.

There are two at-grade railroad crossings in the plan area. One crosses County Line Road north of Mount Hermon Road, and one crosses at the intersection of Mount Hermon Road and Hallsboro Road. Railroad crossing gates were recently installed at these crossings.

The County's Bikeway Plan was adopted by the Board of Supervisors in 1989. The purpose of the Bikeway Plan is "to designate a coordinated system of bike facilities to connect County and State parks with other high bike traffic generators such as schools." The *Bikeway Plan* is not intended to designate roads that are appropriate for bicycle travel, but to identify routes where bikeway facilities should be provided in conjunction with future road improvement projects. Several roads in the Upper Swift Creek Plan area are included on the Bikeway Plan. Bike facilities were included in the widening of Genito Road, from Route 360 to Fox Chase Lane, and in the intersection project at Genito Road and Woolridge Road.

Through truck traffic is prohibited from using Old Hundred Road to travel between Midlothian Turnpike and Genito Road, and between Genito Road and Hull Street Road. In order to violate these prohibitions, trucks must travel the entire length of the restricted route without stopping for business purposes. Trucks that have business along these routes are authorized to use the roads.

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Supporting Document B

(Revised & updated: 4/3/07)

Upper Swift Creek Plan Amendment

Land Use Analysis - Residential, Office, Commercial and Industrial

A. Purpose of Analysis

This analysis attempts to anticipate the need for residential, office, commercial and industrial land within the study area based on potential market demand and community-wide, land use planning practices. Specifically, real estate professionals often analyze potential uses for property based on the principle of "highest and best use", a term often defined as 'the legal use of a parcel of land which, when capitalized, will generate the greatest net present value of income'. Implied in the term is the notion that markets forces (supply, demand, competition, etc.) can best determine how land should be used. However, "highest and best use" is only one principle applicable to a land use analysis. Another, equally important principle is "most appropriate use" which, borrowing from the Code of Virginia, might be defined as 'a coordinated, adjusted and harmonious development of lands within a jurisdiction which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of that jurisdiction's citizens'. Consideration of both principles is appropriate in a land use plan analysis.

This analysis makes no attempt to determine the current or short-term marketability of any one parcel for any one use. Rather, it attempts to anticipate future needs for broad categories of uses throughout the study area over time. In addition, this analysis does not attempt to suggest the specific relationships of these uses to one another within the study area, or within the wider community. These relationships are best determined by means of a Comprehensive Plan amendment. Private market forces (availability and price of land, location, character and age of competing businesses, site specific characteristics such as topography and visibility from roads, etc.) would decide the desirability of a specific use on one parcel over another, as well as the timing for developing such use, based on the principle of 'highest and best use'. The zoning process would determine the appropriateness of such use on a case-by-case basis by applying the guidelines for desirable land use development patterns as outlined in the plan.

Demand for additional, or differently located, land in any zoning classification or land use category is influenced by many factors, some of which are hard to quantify or predict. In addition, limitations on the types and quality of readily available data, together with differing opinions on the significance of this data and how best to analyze, interpret and use it, further complicate the task of predicting future land use needs. For these reasons,

this analysis must be viewed as one of many tools used to craft a land use plan amendment for the <u>Upper Swift Creek Plan</u> study area.

B. Study Area Boundaries and Existing Conditions

The boundaries of the <u>Upper Swift Creek Area Plan</u> includes the <u>Route 288 Corridor Plan</u> to the north, the <u>Southern and Western Area Plan</u> and <u>Central Area Plan</u> to the south, <u>Powhite/Route 288 Area Plan</u> the to the east, and Powhatan County to the west. A small portion of the adopted <u>Upper Swift Creek Plan</u> lies north of Midlothian Turnpike and east of Route 288, and is physically separated from the bulk of the <u>Upper Swift Creek Plan</u> by the <u>Route 288 Corridor Plan</u>. The <u>Plan</u> geography is approximately 57 square miles in area, comprising approximately 13 percent of the land area of the county.

The study area of this <u>Plan</u> amendment includes most of the geography of the currently adopted <u>Upper Swift Creek</u> (adopted in 1991). That small portion of the 1991 <u>Plan</u> physically separated from the study area by the <u>Route 288 Corridor Plan</u> is not included in the geography of this <u>Plan</u> amendment, but will be included in the <u>Robious Area Plan</u> amendment currently under review. The study area includes the majority of the <u>Upper Swift Creek</u> watershed within the jurisdiction of Chesterfield County.

Existing zoning and land use patterns within the study area reflect a mix of residential and agricultural zoning and uses, with commercial zoning and uses along Rt. 360. Rt. 360 provides a major east/west vehicular access, linking the study area with the rest of the county to the east and with Amelia County to the west. Route 288 provides a major north/south vehicular access, linking the study area with the rest of the county to the north and south, and also provides major vehicular access to Powhatan and Henrico Counties to the north. Powhite Parkway provides additional major vehicular access to the northeast portions of Chesterfield County and to the City of Richmond. Planned improvements to Powhite Parkway will further enhance vehicular access between the study area and the surrounding region.

C. Zoning Activity within the Study Area:

Analysis of past zoning activity is one way to anticipate future demand for residential, office, commercial, and industrial zoning and land uses within the study area. Specifically, land is typically rezoned with an expectation, on the part of the owner/developer, that it can be developed in the future for uses within the new zoning category. The following table summarizes zoning activity within the study area between January1, 1993 and April 1, 2007:

Type of Zoning Activity	Acreage
Rezonings from agricultural to residential classifications	3,970 acres
Rezonings from industrial to residential classifications	17 acres
Rezonings from agricultural to commercial/office classifications	157 acres
Rezonings from residential to commercial/office classifications	23 acres

Rezonings from agricultural to industrial classifications	28 acres
Rezonings from industrial to commercial/office classifications	36 acres

Data compiled from Chesterfield County Planning Department zoning database from January 1993 through March 2007

Zoning activity within the study area since 1993 has significantly increased the inventory of residentially zoned land, followed by slight increases in commercial and office zoned land. The following table summarizes net zoning gains/losses within the study area between January 1, 1993, and April 1, 2007:

Industrial	- 35 acres
Commercial/office	+ 216 acres
Residential	+ 3,964 acres
Agricultural	- 4,155 acres

Data compiled from Chesterfield County Planning Department zoning database from January 1, 1993 through April 1, 2007

The following table summarizes the breakdown of zoning acreage and land usage within the study area as of December 31, 2006:

Upper Swift Creek Plan - Zoning and Development

(Note: the study area represents approximately 13% of the county) Zoning Acres % of % of Developed Minimal % Minimal (as of total countyimprovements (as improvements 3/16/07) wide of12/31/06) by zoning category Agricultural 16,400 45 11 6,458 9,605 60 Residential 19 17,233 47 6,848 9,337 58 Office & 2,108 6 18 661 1,026 61 Commercial Industrial 716 2 4 151 77 501 **Totals** 36,457 100

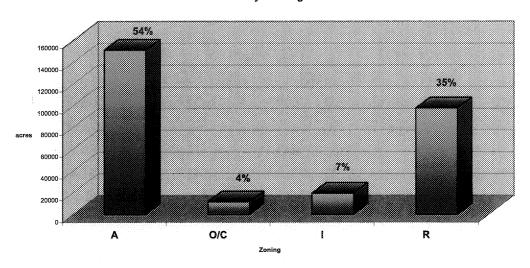
Data for zoning compiled from Chesterfield County GIS data for 3/16/07

Note: This data is a reflection of base zoning only and does not factor uses that may be permitted through CUPD (such as commercial uses on residentially zoned property, etc.) Data for development compiled from the Chesterfield County Planning Department land use database for 2006 (12/31/06) Acreages do not include land in rights of way.

*Recorded as 'vacant' or 'water' in DPD06 land use database.

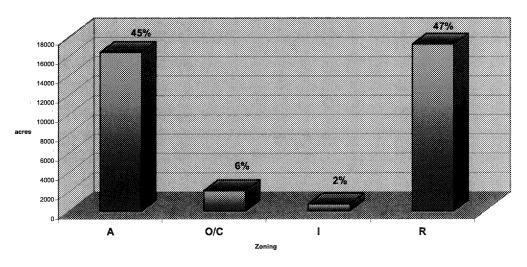
Zoning – Countywide (3/16/07)

County - Zoning



Zoning – Upper Swift Creek Plan amendment geography (3/16/07)

USC Plan amendment - Zoning



Zoning activity - - Conclusions: Based on zoning activity over time, the demand for residentially zoned land is strong, followed by the demand for commercially zoned land. Current zoning activity, as judged by zoning cases within the Plan geography currently

pending before the Planning Commission and the Board of Supervisors, suggests that the demand for residentially zoned land will continue to remain strong in coming years.

E. Residential Development Activity within the Study Area:

Another way to anticipate future demand for residential, office, commercial, and industrial zoning and land uses is to examine development activity in recent years. The influx of new families into the area and the development of new housing units in subdivisions and apartment complexes suggest a demand for residential land uses. Site plan approvals for offices, businesses, and manufacturing facilities suggest a demand for office, commercial and industrial land uses. Projecting population growth in and around the study area can also suggest future demand for housing, jobs, services and retail trade.

The following table estimates population growth rates between January 1, 1994 and December 31, 2006 for the study area and the county as a whole:

Chesterfield County Population Growth, January 1, 1994 to December 31, 2006

Area	1994	2006	% Increase
Study Area	27,900	42,375	52
Countywide	226,900	305,886	35

Data for population compiled from estimates in the Chesterfield County Planning Department land use database for 2006 (12/31/06).

Residential development within the study area is characterized primarily by single-family residences on acreage parcels, by single family and townhouse residences in subdivisions, and by apartments and condominiums in multi-family complexes.

1. Single Family

A review of Chesterfield GIS data from January 1, 1994 through December 31, 2006 reveals an increase of 5,486 single-family residences (on acreage parcels and in single-family subdivisions) within the study area during this time period, from 8,192 residences to 13,678 residences, or an increase of about 67 percent. A similar review for the entire county during this time period for single-family residences reveals a countywide increase of about 37 percent.

According to the <u>Residential Report</u>, as of December 31, 2005, the study area had an inventory of about 4,749 undeveloped lots in recorded and tentatively approved subdivisions (approximately 27 percent of all lots within the study area). For the same year, the county as a whole had an inventory of 19,719 such lots (approximately 19 percent of all lots within the county).

2. Multi-family, Condominium, and townhouse

A review of Chesterfield GIS data from January 1994 through December 2006 reveals an increase of 1,033 multifamily, condominium, and townhouse residences within the study area during this time period, from 1,475 residences to 2,508 residences, or an increase of about 70 percent. A similar review for the entire county during this time period for multifamily, condominium and townhouse residences reveals a countywide increase of 51 percent.

According to the <u>Residential Report</u>, as of December 31, 2005, the study area had 269 undeveloped units in multi-family, condominium and townhouse developments (about 11 percent of all such units within the study area). For the same year, the county as a whole had an inventory of 3,046 undeveloped units (approximately 14 percent of all possible multi-family, condominium and townhouse units within the county).

F. Office, Commercial and Industrial Development Activity within

the Study Area:

1. Office Development

In recent decades, major office zoning and development activity (office park use) has occurred in the northern portions of the county, along Midlothian Turnpike and the Powhite Parkway corridor. In addition, many properties zoned for such use a decade or more ago have yet to begin developing. However, with the recent completion of improvements to Rt. 288, it is anticipated that such development will occur within, and in proximity to, the northern portions of the study area, in the vicinity of the Powhite Parkway/Rt. 288 interchange. As Powhite Parkway is extended to Rt. 360, additional office-type development should occur in proximity to this intersection.

2. Commercial Development

Commercial development patterns in the study area are primarily characterized by commercial zoning and uses along the Rt. 360 corridor. Some of this existing commercial development consists of small businesses on parcels having depths of 200 to 300 feet. An exception to this pattern is the Genito Road/Old Hundred Road intersection, which has developed as a significant node of commercial and office uses.

a. Commercial - - Shopping Centers

The study area includes several convenience scale, neighborhood scale, and community scale shopping centers and one power center. In addition, there are several planned community scale shopping centers currently under review or anticipated for review in the near future. These shopping centers have overlapping market areas.

An analysis of commercial development within and surrounding the study area suggests that most of the area's current need for retail services is provided by shopping centers and other types of commercial establishments located inside and outside the study area. Specifically, in addition to the shopping centers located within the study area, much of the study area lies within the market areas of several other shopping centers and major retail concentrations, including Chesterfield Crossing and Chesterfield Towne Center. While most retail development within the study area is healthy, some exhibit symptoms of declining retail viability.

The demand for additional shopping center space in the future will be closely tied to market area growth. Specifically, convenience scale shopping centers typically draw most of their customers from an area of about 1.5 miles in radius (shopping center trade area). Neighborhood scale shopping centers typically have a trade area of about three miles in radius, and community scale shopping centers have a trade area of about 4.5 miles in radius. Power and regional centers have trade areas of about 7.5 miles in radius. Super regional centers typically have trade areas of about fifteen miles. While many of the services provided by various types of centers do not translate into competition between types, some services do. In addition, centers of a type that have overlapping trade areas often compete for the same markets. At present, the study area seems to be more than adequately served by existing and planned shopping centers.

Increases in population within the market areas of potential shopping center sites generate most of the demand for additional shopping center space. Other factors affecting the demand for additional shopping center space include market competition, both within and outside the study area, and anticipated area industrial employment. Specifically, existing and future shopping center development outside the study area could lower future shopping center demand within the area through competition for the same markets. Conversely, increases in population and industrial employment from new industrial development within, and in proximity to, the study area would have a positive impact, as a significant amount of retail sales would be generated by new area residents as well as by employees who live outside the corridor's market area but who will shop within the area on their way to and from work. The location of any new shopping center(s) within the study area would also be influenced by: the availability of suitably zoned land; parcel size, configuration, access and visibility; environmental constraints such as floodplains and wetlands; and by guidelines for desirable land use patterns as embodied in the county's Comprehensive Plan. The current Upper Swift Creek Plan (adopted in 1991) suggests locations for new shopping center development in the western portion of the study area, to serve the needs of anticipated area residential development.

b. Commercial - - Freestanding

In addition to existing and planned shopping centers, commercial development within the study area is characterized by freestanding commercial uses along Rt. 360 and in proximity to the Genito Road/Old Hundred Road intersection. Included among these uses are: small retail and convenience stores; contractors offices, shops and storage yards; motor vehicle repair; motor vehicle service stations; personal services and professional offices; fast food

restaurants; a hotel; mini-storage and office-warehouses; a commercial outdoor recreational establishment, among other uses. About half of these uses (by acreage) have developed since 1994.

The demand for additional freestanding commercial space is determined in part by the type of use occupying the site. Some freestanding uses, such as department and discount stores, have market areas similar to community scale shopping centers. Other uses, such as home centers and motor vehicle sales, draw from larger areas, to include countywide and even regional markets. Still other uses, such as convenience stores, fast food restaurants and automobile service stations, depend in large part on traffic generated by other uses, such as nearby shopping centers and employment centers, and on commuter traffic passing through the study area.

The location of any new freestanding commercial space would also be influenced by: the availability of suitably zoned land; parcel size, configuration, access and visibility; and environmental constraints such as floodplains and wetlands.

3. Hotel/Motel

At present, there is one hotel/motel within the study area, located at the intersection of Rt. 360 and Old Hundred Road. A site for another is currently under review, located further west along Rt. 360 in the vicinity of Woodlake. Recent hotel/motel development activity within the study area and along Rt. 360 at or near the intersection of Rt. 360 and Courthouse Road (east of the study area), suggests there may be a potential demand for additional hotel/motels in this portion of the county.

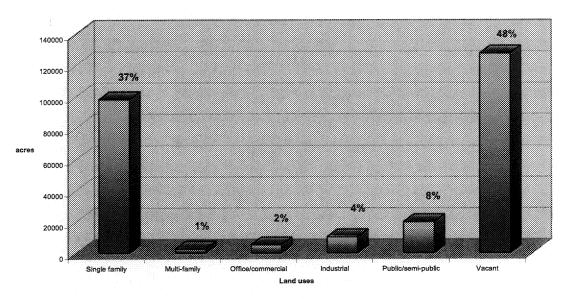
4. Industrial Development

Most industrial zoning and land uses within the study area are located around the Powhite/Rt. 288 interchange and the intersection of Genito and Old Hundred Roads.

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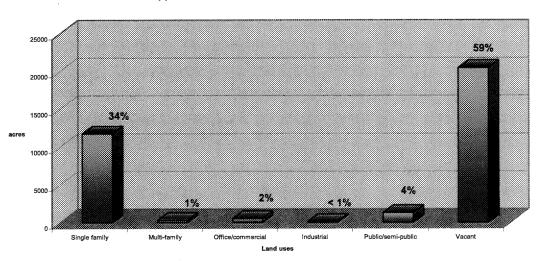
Land use – Countywide (12/31/06)

County - Land uses



Land use – Upper Swift Creek Plan amendment geography (12/31/06)

Upper Swift Creek Plan amendment - Land uses



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Supporting Document C

(October 2005)

Upper Swift Creek Plan Amendment: Transportation Options

Maintenance and construction of Chesterfield County's road system is the responsibility of the Commonwealth of Virginia. Funding from the Virginia Department of Transportation (VDOT) has been inadequate to address existing needs, and the prospects for additional state funding are uncertain at best. Alternate funding sources continue to be investigated to address the shortfall between road needs and available funding. Several options have been considered for supplementing the state road funding. The following options are available to supplement state and local funding but would not be sufficient to address all of the county's needs. Options include, but are not limited to:

Transportation Service District in the Upper Swift Creek Plan Area: This
would provide for an additional tax levy against real property in the service
area. An assessment rate between \$0.10 and \$0.15 per \$100 of assessed
value would be required to finance \$90 to \$120 million in road improvements.

It is estimated that this would equate to an additional \$200 to \$300 per year on the median tax bill of the single family property owner based on the January 2005 assessments, and greater impact for commercial and multi-family property owners.

The amount of additional taxes is subject to many variables: changes in assessed values, amount financed, frequency of debt issues and overall debt repayment requirements.

- Use of Cash Proffers for Road Debt Service: The 2004 General Assembly
 established local authority to use cash proffer revenues for the repayment of
 bonds. Discussions with rating agencies indicate unfavorable bond ratings on
 cash proffer backed debt due to the uncertain long-term reliance on this
 revenue stream.
- General Obligation Bonds for Roads: Voters overwhelmingly approved the
 issuance of \$40 million in general obligation bonds for roads in the 2004
 referendum. One of the bond projects was in the plan area -- the widening of
 Hull Street Road between Swift Creek and Winterpock. Bonds are repaid
 from locally generated revenues.

Additional referenda on general obligation bonds could be used in the future to fund road improvement projects. However, the county's available debt has been allocated through 2011, and there is no capacity to issue additional debt until that time.

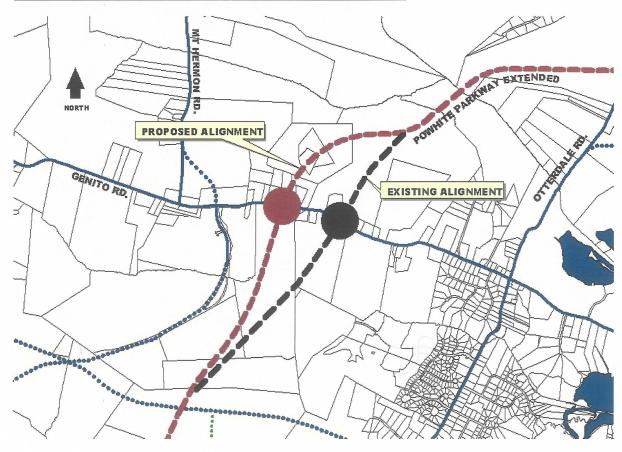
 Reprioritization of Local Capital Improvement Funding Sources for Road Projects: The Board of Supervisors annually adopts a Capital Improvement Program (CIP) allocating funding sources to many competing

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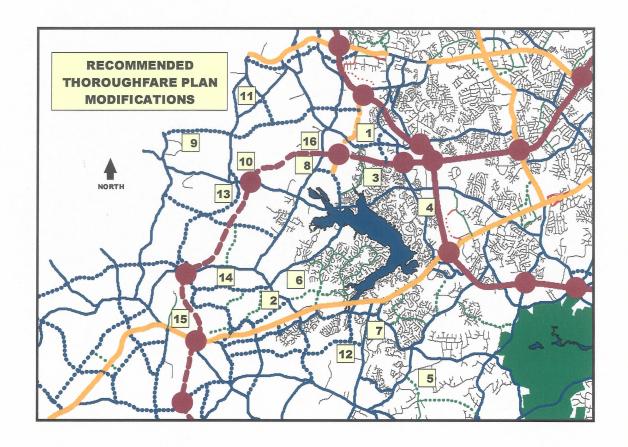
needs such as schools, public safety, human services and general county improvements. Road funding has been primarily considered a state responsibility, and has not kept pace with current needs. A reprioritization in the CIP of available resources could shift funding from these noted areas to road projects, in essence supplementing state funding.

- Cash Proffers: In conjunction with residential development, the county has accepted cash proffers for capital improvements since 1990. Since then, approximately \$12.1 million has been collected for roads countywide. Cash Proffer funds for road improvements must be spent in the area of the county where they are generated. Since 1990, \$2.3 million has been raised for road improvements in the area of the county encompassing the Upper Swift Creek Plan area. Approximately \$1.2 million of those funds have been spent fixing roads in that area of the county.
- Powhite Parkway Extension as a Toll Road: The Public-Private Transportation Act (PPTA) of 1995 allows private companies to propose building public roads. Two private-sector proposals were submitted to VDOT under the PPTA, for the extension of the Powhite Parkway from its current terminus at Old Hundred Road to Hull Street Road. Both proposals would complete this section of the Powhite Parkway Extension as a Toll Road. Both proposals were returned to the applicants by VDOT.

Realignment of Powhite Parkway Extended at Genito Road



Recommended Thoroughfare Plan Modifications



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Chesterfield County, Virginia

Memorandum

DATE: JULY 3, 2007

TO: CHESTERFIELD COUNTY PLANNING COMMISSION

FROM: STEVE SIMONSON, CHESTERFIELD COUNTY TRANSPORTATION

DEPARTMENT

SUBJECT: UPPER SWIFT CREEK PLAN AMENDMENT - ADDITIONAL MAP

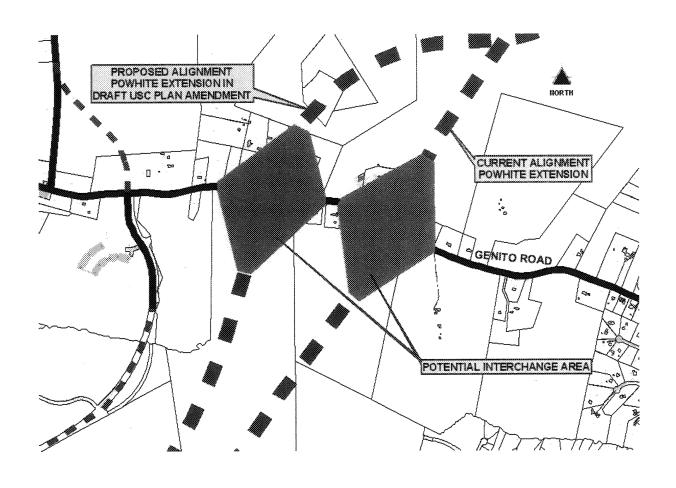
SHOWING THE REVISED ALIGNMENT OF THE POWHITE

PARKWAY EXTENSION AT GENITO ROAD

Please find attached a map showing both the current and proposed alignments of the Powhite Parkway Extension where it crosses Genito Road. The map also shows a very approximate "potential interchange area". The interchange area is not based on any specific design work, but simply shows an area that has been utilized for similar interchange construction in other areas of the County.

It is our intention to add this map to "Supporting Document C" of the <u>Upper Swift Creek</u> Plan Amendment.

Supporting Comment (125)



Supporting Document D

TECHNICAL MEMORANDUM

CH2MHILL

Upper Swift Creek Plan Total Phosphorus Loading Analysis for Planned Land Use Scenarios

PREPARED F	OR:
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Chesterfield County

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Executive Summary

Annual total phosphorus (TP) loads were calculated for four scenarios, testing different housing densities for the future Upper_Swift Creek plan. In-lake phosphorus concentrations were predicted for each scenario. Load reductions to achieve the desired in-lake concentration of 0.05 milligrams per liter (mg/L) for total phosphorus were calculated for each scenario. The Planning Department's Preferred Alternative, Scenario B (2 dwelling units per acre) can be met using the 1999 management plan's best management practice (BMP) mix.

Introduction

In 1999, CH2M HILL and Timmons Group working with the County of Chesterfield, Virginia, developed the Watershed Management Master Plan and Maintenance Program for the Swift Creek Reservoir Watershed (Management Plan). The Management Plan was developed in response to citizen and County staff concerns that future development in the Swift Creek Reservoir watershed would lead to eutrophication and degraded water quality in the reservoir.

The Swift Creek Reservoir serves both as a drinking water supply and a recreational destination. Part of the Management Plan entailed using the P8 Urban Catchment Model

(Walker, 1990; Walker, 2000) to determine the annual TP loads and flows from the reservoir's 10 tributary watersheds and from the areas that contributed direct runoff. The results of the P8 modeling effort were in turn used as input for a predictive model developed by K. H. Reckhow (Reckhow, 1989). The Reckhow Model was used to predict the mean TP concentration in the reservoir during the summer.

In 2004, CH2M HILL was contracted to update the P8 tributary models and the Reckhow Model based on current land use. In 2005, CH2M HILL and Timmons Group were tasked with evaluating four different land use scenarios in support of a revised Upper Swift Creek Plan. This technical memorandum (TM) discusses the steps to collect the required data, and evaluate the scenarios using the P8 and Reckhow models. The TM compares the results with those developed in 1999.

<u>Land Use Scenario Formulation and Data Development</u> Land Use Scenario Formulation

The existing land use from 2004 was adopted as the base land use. Since the 2004 land use was based on tax records and current use, it provides an accurate portrait of the watershed. The County desired to model the impacts of four different scenarios on water quality. As was the case in 1999, each scenario's projected planned land use was based on the conversion of vacant land to another land use, typically residential. It was assumed that the planned land use for Powhatan County in the upper portion of the watershed would be the same as 1999. Each scenario would look at the following different residential densities:

- Scenario A − 2.2 dwelling units per acre (du/ac).
- Scenario B 2 du/ac.
- Scenario C − 1.5 du/ac.
- Scenario D − 1.0 du/ac.

Scenario A uses the housing density from the 1999 study instead of the 2.0 du/ac adopted in 2000 in order to maintain continuity with the 1999 results. All four scenarios have identical non-residential land use.

Conversion of vacant parcels was guided by the geographic information system version of the County's development potential database. Two fields in this database were used to determine whether an individual parcel was to be converted. The first was the field LND_USE_03, which indicates the actual land use for a given parcel in 2003. All parcels with VACANT in the LND_USE_03 field were identified as candidates for conversion. The second key field was ZONE_03, the existing zoning for the parcel. Vacant parcels zoned "A" indicate parcels that are subject to future development, but no such development had been officially identified for the parcel.

The next step for the vacant Zone A parcels was to check the development potential database to determine whether the parcel was projected for residential or commercial development. If it was projected for commercial development, then the parcel was identified as commercial/light industrial (CLI). If the parcel was projected for residential development, then it was assigned the appropriate land use code based on the scenario's residential densities.

Vacant parcels that are zoned for any nonresidential category were projected to the corresponding land use. Residential land use was assigned to vacant parcels zoned for residential based on parcel size and the approved number of units.

Certain parcels in the database were designated by the Planning Department as Deferred Growth Area parcels. The Deferred Growth Area parcels all have a maximum housing density of 0.2 du/ac and are all greater than 4.5 acres. These parcels are located in 6 of the 11 contributing watersheds including:

- Blackman Creek
- Horsepen Creek/ Deep Creek
- Otterdale Creek
- Swift Creek
- Turkey Creek
- The direct runoff component, which corresponds to runoff directly reaching the reservoir

Methodology for Impervious Fraction Calculations

One of P8's input parameters is the impervious fraction for each subwatershed. Impervious fractions were assigned to most land use categories based on the 1999 and 2004 modeling efforts. Impervious fractions for the converted residential areas were assigned based on the values in Table 1.

TABLE 1 Impervious Fraction Revisions Upper Swift Creek Plan Modeling Support

Scenario	Residential Density (du / ac)	Impervious Fraction
A	2.2 – 4.0	0.35
В	2.0	0.34
С	1.5	0.31
D	1.0	0.15
B, C, D Deferred Growth Areas	0.2	0.05

Additionally, the new land use (CLI) was assigned an impervious fraction of 0.90. Using the revised impervious fraction information, the impervious fractions were calculated for each subwatershed.

Watershed Modeling

P8 Modeling

The 11 P8 models (10 tributary and 1 direct runoff to the lake) developed for the 2004 existing land use were modified to reflect changes in land use according to each scenario. The only change to each model was an adjustment of the impervious fraction for each subwatershed to account for land use changes. The remaining data, including precipitation and temperature, were identical to those used in the previous modeling efforts in 1999 and 2004.

Table 2 compares the land use scenarios among the three modeling efforts (1999, 2004, and current). Included in the table is a description of each scenario's development.

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TABLE 2 Scenario Summary Upper Swift Creek Reservoir Watershed Management Plan

Modeling Scenario	Description
1999 Existing Land Use	Existing land use at the time of the original study.
2004 Existing Land Use	Land use updated to 2004 including existing BMPs.
1999 Projected Planned Land Use	Planned land use projected by the original study. Based on converting vacant land to 2.2 du/ac
2005 Scenario A Projected Planned Land Use	Planned land use projected by converting vacant land from 2004 Existing Land Use to 2.2 du/ac. Maintains continuity with 1999 study.
2005 Scenario B Projected Planned Land Use	Planned land use projected by converting vacant land from 2004 Existing Land Use to 2 du/ac, additional conversion of 4,079 acres to RR (Deferred Growth Areas).
2005 Scenario C Projected Planned Land Use	Planned land use projected by converting vacant land from 2004 Existing Land Use to 1.5 du/ac, additional conversion of 4,079 acres to RR.(Deferred Growth Areas)
2005 Scenario D Projected Planned Land Use	Planned land use projected by converting vacant land from 2004 Existing Land Use to 1 du/ac, additional conversion of 4,079 acres to RR.(Deferred Growth Areas)

Notes:

RR = rural residential

Table 3 summarizes the previous modeling efforts, breaking down by tributary watershed the TP annual loads calculated for the 1999 Existing Land Use, 2004 Existing Land Use, and the 1999 Projected Planned Land Use scenarios.

TABLE 3Summary of Previously Modeled Total Phosphorus Annual Loads
Upper Swift Creek Reservoir Watershed Management Plan

Watershed	1999 Existing	2004 Existing	1999 Projected
	Land Use	Land Use	Planned Land Use
TP Annual Load (lb/yr)	12,189	14,547	43,508

The results of the tributary model runs for Scenarios A through D are summarized in Table 4. The total TP annual load for Scenario A is significantly greater than any of the other scenarios. The overall TP annual loads from Scenarios B and C are similar to each other and to the 1999 projected planned land use. Scenario D is 11 percent lower than the 1999 results. The annual loads by tributary watershed are shown in Figure 1. It is clear that several watersheds are projected to experience denser development than what was anticipated in 1999. This effect can be seen where the annual load for Scenario A exceeds the annual load for the 1999 projected planned land use by 10 percent. This is the case with Turkey Creek, Otterdale Creek, Horsepen Creek/ Deep Creek, and the direct runoff component. The total annual flows generated by each scenario are similar.

All four scenarios and the 1999 planned land use total flows fall within 3 percent of each other.

TABLE 4Summary of Total Phosphorus Annual Loads and Flows by Scenario with Deferred Growth Areas Upper Swift Creek Reservoir Watershed Management Plan

	Scenario A Projected Planned Land Use	Scenario B Projected Planned Land Use	Scenario C Projected Planned Land Use	Scenario D Projected Planned Land Use	1999 Projected Planned Land Use
Total TP Annual Load (lb/yr)	47,674	42,784	42,181	38,926	43,508
Total Annual Flows (ac-ft)	100,923	99,376	99,186	98,214	100,392

Reckhow Modeling

As in the two previous modeling efforts, the impact of the TP loads on Swift Creek Reservoir were projected by using one of Reckhow's empirical relationships for Southeastern U.S. reservoirs:

$$P = \frac{P_{in}}{1 + 3P_{in}^{0.53} T^{0.25} Z^{0.58}}$$

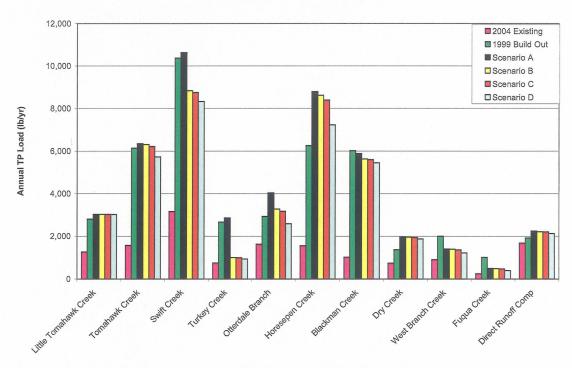
where:

P is the median summer in-lake TP concentration (mg/L) P_{in} is the mean annual influent TP concentration (mg/L) T is the hydraulic detention time (yr) Z is the mean depth of the lake (m)

FIGURE 1

Summary of Total Phosphorous Annual Loads by Scenario Upper Swift Creek Reservoir Watershed Management Plan

Tributary Watershed Annual TP Loads

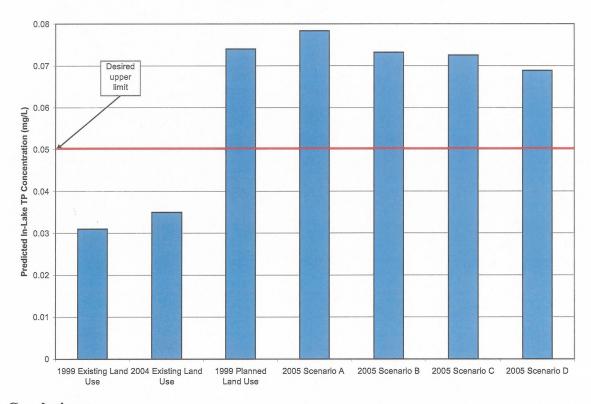


 P_{in} was calculated by converting the TP annual load to kilograms per year (kg/yr) and dividing by the total annual flow converted to cubic meters per year (m³/yr). The hydraulic detention time T, was calculated by dividing the reservoir volume by the annual flow in m³/yr. Both the reservoir volume and average depth were assumed to be the same as those used in the Management Plan. Reckhow Model results are displayed in Figure 2 and summarized in Appendix A.

All of the future scenarios are above the desired 0.05 mg/L limit for TP. In-lake concentrations greater than 0.05 mg/L are considered to be eutrophic, causing severe

water quality degradation in the reservoir. Scenario A results in a higher in-lake TP concentration than the 1999 planned land use. Scenarios B and C are similar to the 1999 results. Scenario D is slightly lower than the 1999 results.

FIGURE 2
Summary of Predicted In-Lake TP Concentrations by Scenario
Upper Swift Creek Reservoir Watershed Management Plan



Conclusions

The results of each planned land use scenario point to exceeding the TP limit for in-lake concentrations. The next step was to determine the maximum level of annual loading that will result in an in-lake TP concentration of 0.05 mg/L or less. The results of this calculation are in Table 5.

As shown in Table 5, the annual loads required to achieve the in-lake goal vary approximately between 25,000 and 26,000 pounds per year. This variation is due to the relatively similar loads and flows among all scenarios as well as the constant volume and average depth of the reservoir. The last column in the table shows the reduction in the TP load that is needed to achieve the maximum level of 0.05 mg/L. The analysis indicates that significant reductions are needed.

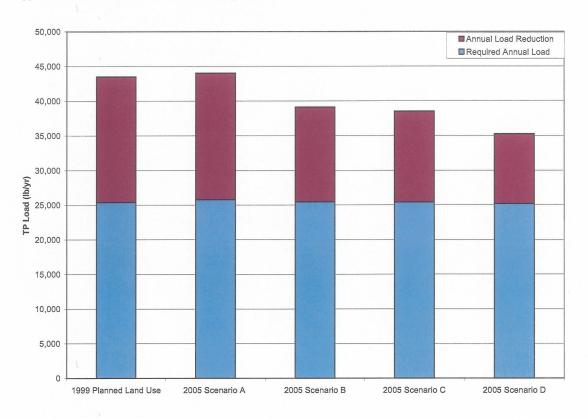
Based on discussions with Planning Department staff, the likely scenario to be recommended for the new land use plan is Scenario B, which is projected to have an annual load of 42,784 pounds per year TP at the planned land use. The modeling results predict that this load will require a reduction of approximately 17,000 pounds of TP per year in order to achieve the in-lake goal. This reduction requirement is 6 percent less than the reduction based on the 1999 planned land use projection (Figure 3).

TABLE 5
Load and Reductions Required to Meet Reservoir Total Phosphorous Limit (0.05 mg/L)
Upper Swift Creek Reservoir Watershed Management Plan

Modeling Scenario	Annual TP Load (lb/yr)	Annual TP Load Required to Achieve 0.05 mg/L (lb/yr)	Reduction Required to Annual Load (lb/yr)
1999 Existing Land Use	12,189	N/A	N/A
2004 Existing Land Use	14,547	N/A	N/A
1999 Planned Land Use	43,508	25,402	18,106
2005 Scenario A Projected Planned Land Use	47,674	26,104	21,570
2005 Scenario B Projected Planned Land Use	42,784	25,767	17,017
2005 Scenario C Projected Planned Land Use	42,181	25,725	16,456
2005 Scenario D Projected Planned Land Use	38,926	25,513	13,413

The increase in impervious TP associated with the new land use CLI results in an increase in more than 4000 pounds of TP per year. As an extra precaution, the County may want to consider additional onsite BMPs for these areas. The onsite BMPs could remove the TP load from imperviousness greater than 55 percent at all future CLI sites.

FIGURE 3
Annual Loads and Required Reductions by Scenario
Upper Swift Creek Reservoir Watershed Management Plan



References

Reckhow, K.H. 1989. Water Resources Bulletin, Volume 24, No. 4, pp 723-734. Walker, William D., Jr., PhD. 1990. P8 Urban Catchment Model Program Documentation, Version 1.1. May.

Walker, William D., Jr., PhD. 2000. P8 Urban Catchment Model Program, Version 2.4. February.

Appendix A

TABLE A-1 Summary of Previously Modeled Total Phosphorous Annual Loads, by Watershed Upper Swift Creek Reservoir Watershed Management Plan

Watershed	1999 Existing Land Use (lb/yr)	2004 Existing Land Use (lb/yr)	1999 Projected Planned Land Use (lb/yr)
Little Tomahawk Creek	754	1,270	2,810
Tomahawk Creek	934	1,573	6,138
Swift Creek	3,542	3,163	10,376
Turkey Creek	751	750	2,665
Otterdale Creek	709	1,630	2,933
Horsepen Creek / Deep Creek	1,662	1,566	6,256
Blackman Creek	1,006	1,019	6,021
West Branch	580	742	1,371
Dry Creek	504	904	2,004
Fuqua Creek	415	248	1,010
Direct Runoff Component	1,333	1,682	1,924
Total	12,189	14,547	43,508

TABLE A-2Summary of Previously Modeled Annual Flows, by Watershed Upper Swift Creek Reservoir Watershed Management Plan

Watershed	1999 Existing Land Use (ac-ft / yr)	2004 Existing Land Use (ac-ft / yr)	1999 Projected Planned Land Use (ac-ft / yr)
Little Tomahawk Creek	5,415	5,621	6,442
Tomahawk Creek	8,047	8,196	9,873
Swift Creek	24,670	24,546	27,095
Turkey Creek	6,121	6,060	6,732
Otterdale Creek	5,362	5,560	5,963
Horsepen Creek / Deep Creek	7,996	8,021	9,849
Blackman Creek	8,246	8,166	9,522
West Branch	4,290	4,351	4,752
Dry Creek	4,372	4,548	4,975

TABLE A-2Summary of Previously Modeled Annual Flows, by Watershed Upper Swift Creek Reservoir Watershed Management Plan

Watershed	1999 Existing Land Use (ac-ft / yr)	2004 Existing Land Use (ac-ft / yr)	1999 Projected Planned Land Use (ac-ft / yr)
Fuqua Creek	3,571	3,567	3,840
Direct Runoff Component	10,805	11,576	11,347
Total	88,894	90,212	100,392

TABLE A-3
Summary of Total Phosphorous Annual Loads by Watershed
Upper Swift Creek Reservoir Watershed Management Plan

Watershed	Scenario A Projected Planned Land Use (lb/yr)	Scenario B Projected Planned Land Use (lb/yr)	Scenario C Projected Planned Land Use (lb/yr)	Scenario D Projected Planned Land Use (lb/yr)	1999 Projected Planned Land Use (lb/yr)
Little Tomahawk Creek	3,030	3,033	3,033	3,026	2,810
Tomahawk Creek	6,348	6,316	6,223	5,722	6,138
Swift Creek	10,632	8,840	8,760	8,334	10,376
Turkey Creek	2,855	1,003	996	938	2,665
Otterdale Creek	4,035	3,281	3,179	2,589	2,933
Horsepen Creek / Deep Creek	8,795	8,628	8,401	7,241	6,256
Blackman Creek	5,888	5,630	5,601	5,448	6,021
West Branch	1,959	1,958	1,947	1,873	1,371
Dry Creek	1,401	1,392	1,365	1,225	2,004
Fuqua Creek	491	489	475	400	1,010
Direct Runoff Component	2,240	2,213	2,201	2,131	1,924
Total	47,674	42,784	42,181	38,926	43,508

TABLE A-4
Reckhow Model Results
Upper Swift Creek Reservoir Watershed Management Plan

Modeling Scenario	Predicted In Lake TP Concentration (mg/L)
1999 Existing Land Use	0.031
2004 Existing Land Use	0.035
1999 Planned Land Use	0.074
Scenario A	0.078
Scenario B	0.073
Scenario C	0.073
Scenario D	0.069

Supporting Document E

Existing Conditions

Environmental Inventory

The Upper Swift Creek Plan is one three plans for the watershed area draining to the Swift Creek Reservoir. The Upper Swift Creek Watershed is rich with natural resources that if managed properly should provide for the water quality benefits needed for the preservation of the Swift Creek Reservoir. An environmental resource inventory (ERI) was performed as part of the *Watershed Management Master Plan* (2000). Many of the ERI features are continuality updated, to reflect additional data and changing field conditions. The ERI is a planning tool that includes information about and location of the physical and natural features that are determined important within the boundaries of the watershed. By using this tool to identify natural resources that help maintain water quality, the county can protect the tributaries and the Reservoir in an efficient, cost effective manner.

Swift Creek Reservoir Watershed Boundary:

The watershed covers 61.5 square miles or approximately 42,000 acres with portions of three magisterial districts overlaying its boundaries. Generally located west of Route 288 between Route 360 and Genito Road, 85% (35,000 acres) is contained within Chesterfield County with the remaining 15% in Powhatan County. The delineation of the watershed drainage boundaries is important because that boundary defines the portion of the County to be considered when establishing protection measures for source water (drinking water). The watershed can be divided into eight sub-watershed areas. By segmenting the delineation, management efforts may be targeted to those areas that are most vulnerable to water quality degradation and therefore are the highest priority to protect or restore. Moving downstream the, those stream segments that are closest to the Reservoir will have the greatest impact on its water quality, while those stream segments at the top of the watershed may have less of an impact on water quality (see Figure 1).

Hydrology (Tributary Streams):

The Swift Creek Reservoir Watershed is made of a network of eleven streams over 248 miles long that combine to form eight sub-watersheds, which flow directly into the Reservoir:

- Little Tomahawk Creek
- Tomahawk Creek
- Swift Creek/Turkey Creek
- Otterdale Creek
- Horsepen Creek/Blackman Creek/Deep Creek
- West Branch
- Dry Creek

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Fuqua Creek

The Swift Creek/Turkey Creek system drains the largest area (35 percent or approximately 14,700 acres) and the Fuque Creek drains the smallest area (4 percent or approximately 5880 acres) of the watershed. The networks of streams carry drainage from groundwater and storm flows. The physical and chemical degradation of these systems will result in increases pollutant loads, significantly affecting the water quality downstream. These effects of degradation can be further exacerbated if the stream systems become unstable and disconnected from floodplains and wetlands (see Figure 2).

Geologic Features:

The Upper Swift Creek Watershed is located in the Richmond coalfield, situated on a structural basin filled with Triassic-age sediments. This basin extends to parts of Goochland, Henrico, Amelia, and Powhatan Counties. The watershed contains the part of the Clover Hill Mining District as identified in the Virginia Division of Mineral Resources Publication 85 "Mining History of The Richmond Coalfield of Virginia." Mining operations in the watershed consisted of Coate's Pits and Hill Shaft, which were the northernmost workings in the District. Both operations were shut down by the mid 1800s. Another geologic feature of note is the existence of petrified wood formations found primarily in the Otterdale and Tomahawk Creek watersheds. The watershed also contains a large number of established spring fed ponds typically found in the upper reaches of sub-watersheds. Many streams in the watershed have been found to have their origin at or near groundwater springheads. While not unique to this watershed, these ponds and springs illustrate the importance that groundwater resources have played in the history of the area (See Figure 3).

Wetlands:

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soils conditions. These wetland resources are especially valuable for the protection and preservation of terrestrial and aquatic habitats and wildlife. In their natural conditions they provide flood control, water quality and maintain stream flow. Often these wetlands can be damaged by alterations to their associated streams. For example, down cutting, caused by increased storm flow volumes to a stream can lead to a draining or a drying of the wetland, reducing its quality and the overall water quality of the stream. Providing additional forested buffer for wetland resources will work to keep these systems intact, protecting the water quality of the Reservoir.

Wetlands account for approximately 5289 acres or 12 percent of the total acreage of the Swift Creek Reservoir Watershed. The greatest wetland acreage is concentrated at the lower stream reaches, near the head of the reservoir. Acreage decreases progressively upstream and is minimal at the headwaters. The greatest wetland acreage and diversity are associated with Swift Creek (approximately 853 acres or 16 percent) while the least

acreage and diversity is associated with Little Tomahawk Creek (approximately 146 acres or 3 percent). The Horsepen Creek/Blackman Creek/Deep Creek system accounts for approximately the second largest wetland acreage (approximately 519 acres or 10 percent) within the watershed (see Figure 4).

The dominant wetland type found is palustrine forested or bottomland hardwood forest. Bottomland hardwood forests are flat lowlands along streams or rivers usually on alluvial floodplains that are periodically flooded. They generally have a linear form as a consequence of their proximity to streams. Many of the stream systems in the watershed are associated with high quality wetlands. Swift Creek, Horsepen Creek and Blackman Creek contain a combination of large forest wetlands, high quality scrub-shrub and emergent wetlands.

Reservoir, Lakes & Ponds:

The Swift Creek Reservoir was constructed in 1966 and includes a 1,700-acre impoundment with 5.0 billion gallon capacity. Its mean depth when full is nine feet. The plant has a production capacity of 12 Mgal/Day. An additional 221 acres of impoundments (ponds and lakes) can be found throughout the Swift Creek Reservoir Watershed. These ponds were created as recreational or farm ponds facilities. As development occurs these facilities will have stormwater treatment potential.

Topography and Soils:

Soils have inherent characteristics that control their ability to retain or transmit water, and their stability. The Swift Creek Reservoir Watershed lies west of the Fall Line within the Central Piedmont Physiographic Province. The topography of the planning area consists principally of flatlands and gently rolling hills typical of this region. The *Soil Survey of Chesterfield County, Virginia* (U.S. Department of Agriculture-Soil Conservation Service [USDA-SCS], 1978) indicates the dominant soil association found within this area is Creedmor-Mayodan. This association is formed from material weathered from Triassic sandstone and shale compressed together (see Figure 5). The soils can be characterized as well drained clayey to gravelly clayey. They are low in organic-matter content, low in natural fertility, and can be strongly acidic. The soil survey also identifies eight hydric soil series within the watershed that are associated with floodplains, drainageways, and depressions and their runoff potential (see Figure 6). Knowledge of soil sciences is an important factor in determining the amount of erosion and stormwater runoff that could occur during development. This knowledge is also important for the application of available land management techniques and alternative stormwater treatments.

Flood Plains:

Flooding is a natural process that protects stream channels and beds form erosive forces during elevated storm flows. When inundated, the floodplain acts as a natural flood and erosion control, decreasing the magnitude of floods downstream. Decreasing the magnitude of flooding is beneficial for landowners in riparian areas and aquatic wildlife. In addition, the floodplain protects water quality by filtering runoff and promoting groundwater recharge. Finally, floodplain wetlands act as nutrient and sediment sinks, which also improves water quality in streams. This land area serves many functions and provides important habitats for wildlife (see Figure 7).

Stream Corridor Buffer:

In response to the Chesapeake Bay Preservation Act of 1988, Chesterfield County enacted the Chesapeake Bay Preservation Ordinance in 1990 (Ordinance). The ordinance protects environmentally sensitive features from improper development that would contribute to the significant degradation of the water quality of the County's waters, which drain into the Chesapeake Bay. Chesapeake Bay Preservation Areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs), which are subject to the criteria set forth in the Ordinance.

RPAs are environmentally sensitive lands at or near the shoreline that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts that may cause significant degradation to the quality of County waters. In their natural condition, these lands provide for the removal, reduction, or assimilation of sediments, nutrients, and pollution runoff entering the Chesapeake Bay and its tributaries. RMAs are land types that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the RPA.

The RPA boundaries include 100-foot-wide buffers adjacent to and landward of the nontidal wetlands. The County has generally mapped RPA boundaries within the Swift Creek Reservoir Watershed according to hydric soil maps from the Soil Survey of Chesterfield County, Virginia. The RPA boundary extends 100-feet outward from the hydric soil boundary. In 2004, amendments to the Ordinance required site-specific determinations of perennial flow which thereby requiring buffers to be located along these stream segments. The County Resource Protection and Boundaries map identifies this buffer (see Figure 8). The area of RPA within the Swift Creek Reservoir Watershed, as of July 2006, was approximately 8.52 square miles or 5,454 acres. This includes 149,934 feet or 28.4 miles of perennial stream.

Rare, Threaten and Endangered Species:

Identification and protection of areas that contain rare, threaten and endangered species require special concerns. As described in the assessment conducted in 2000, Swift Creek Watershed has no federally endangered species known to exist within its bounds. Several species of plants are considered state-rare with one amphibian (Barking Tree Frog) considered state-threatened. The Bald Eagle was the only species considered both state and federal threatened.

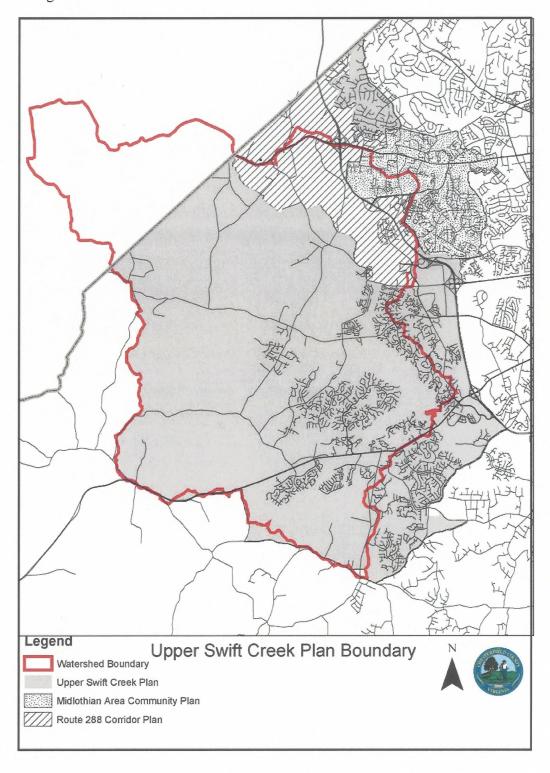
Wildlife:

A vast array of wildlife to include deer, beavers, fox, hawks, eagles, ospreys, waterfowl, and heron rookeries are found along the Reservoir, wetlands, and forests throughout the watershed. A state birdwatching route cuts through the center of the watershed along Genito Road. The Reservoir has an abundant population of finfish, which includes the highest number of state citations for Chain Pickerel in 2005 Protecting contiguous forest and riparian corridors from development and encroachment is fundamental to maintaining a healthy wildlife population throughout the watershed.

Cultural Resources:

Background research to locate and identify documented cultural resources in the Swift Creek Reservoir Watershed was conducted by CH2M HILL in 2000. This information was used to develop historic contexts for evaluating the archaeological and architectural resources located in the watershed. Information on documented cultural resources was obtained from the Virginia Department of Historic Resources (VDHR) in Richmond, Virginia. Figure 9 shows the location of historic structures and documented archaeological sites in the watershed. Due to the rich natural resources of the area many of the historic structures located in this area can be found associated with these resources in the form of spring houses, mill runs, and earthen dams.

Figure 1



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Figure 2

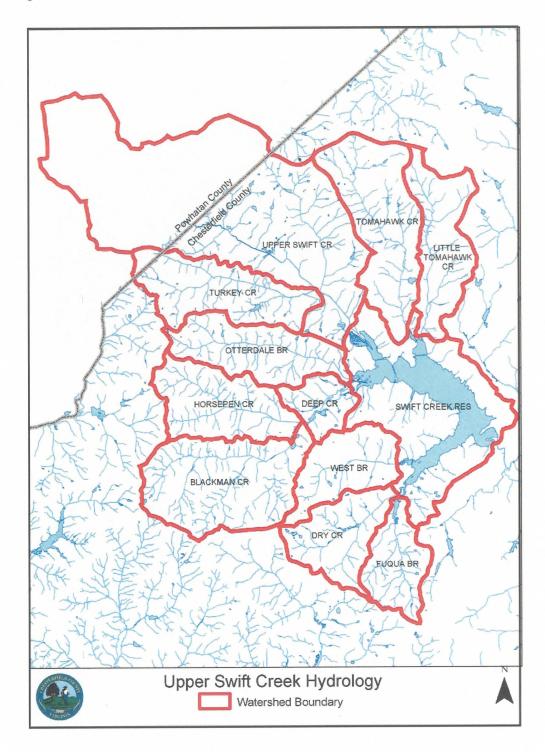


Figure 3

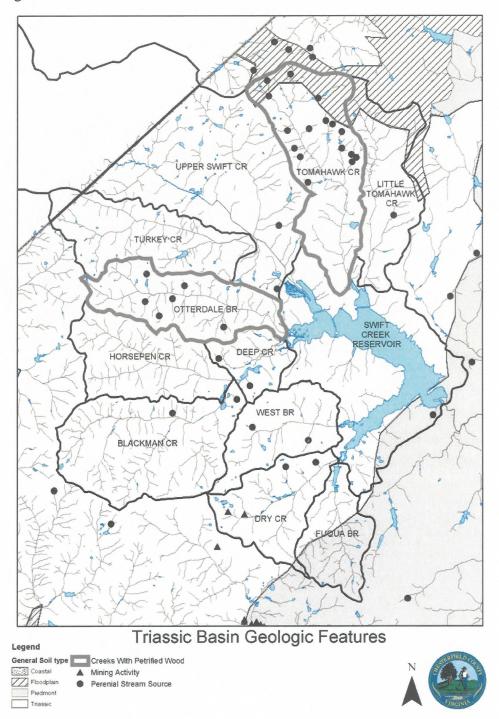


Figure 4

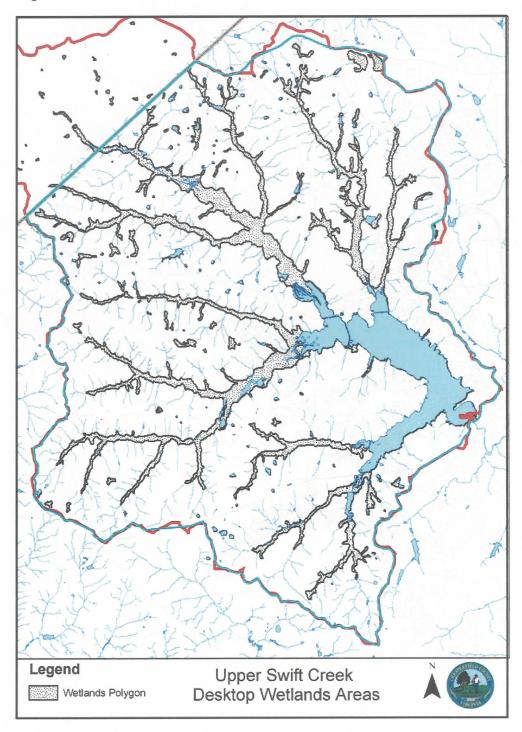


Figure 5

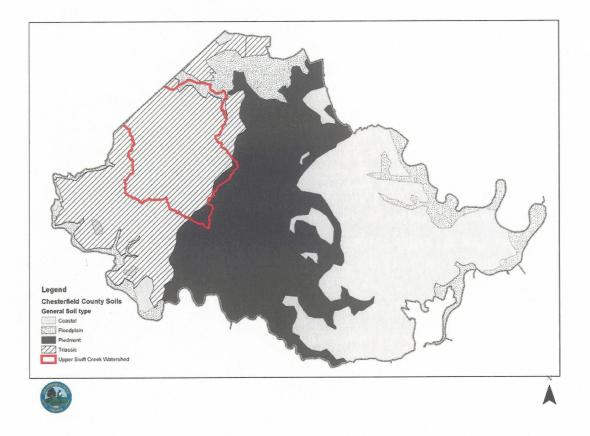


Figure 6

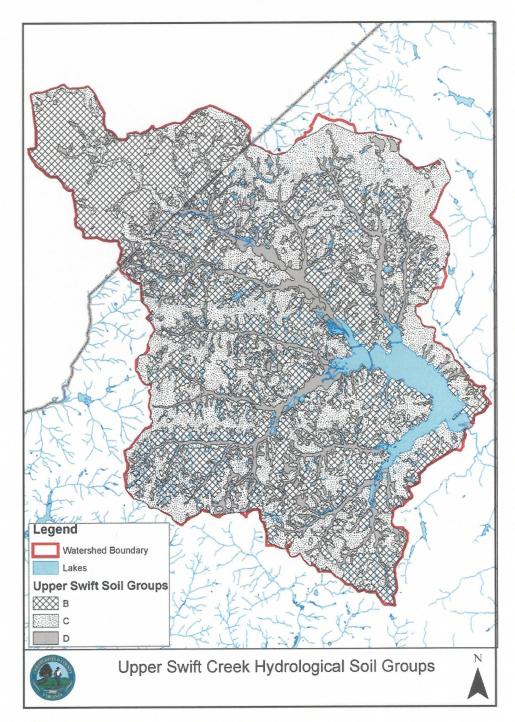


Figure 7

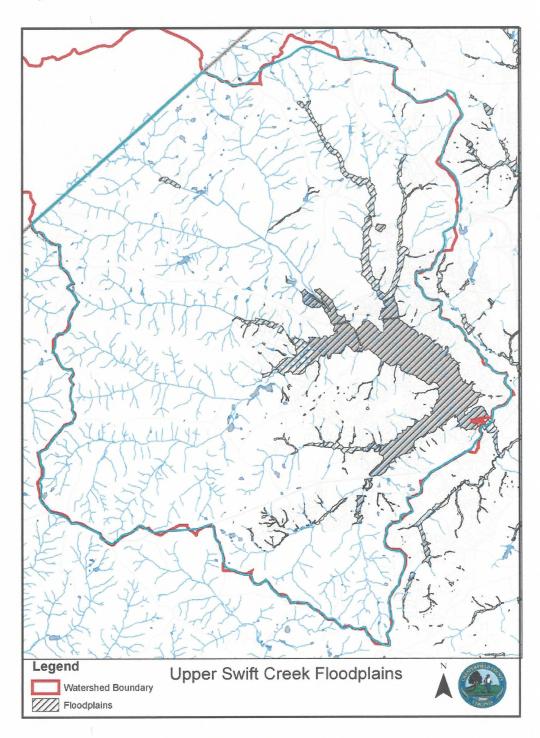
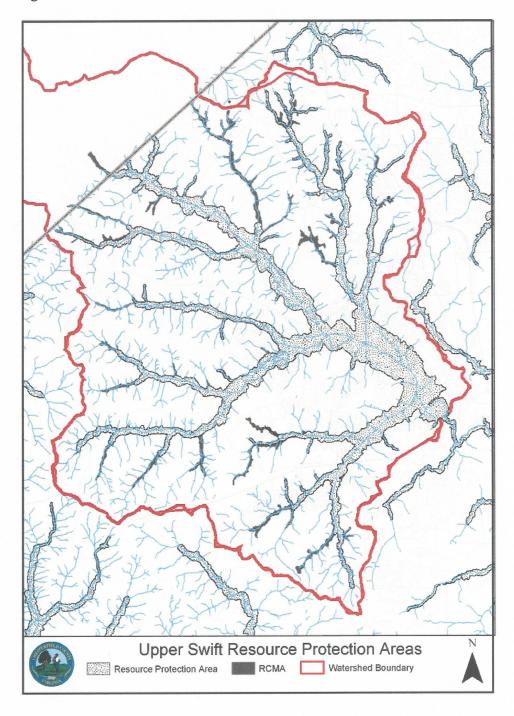
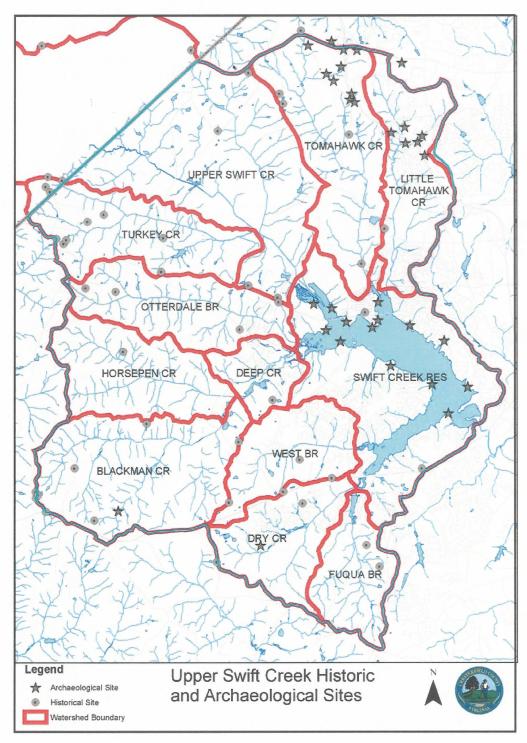


Figure 8



57 **000294**

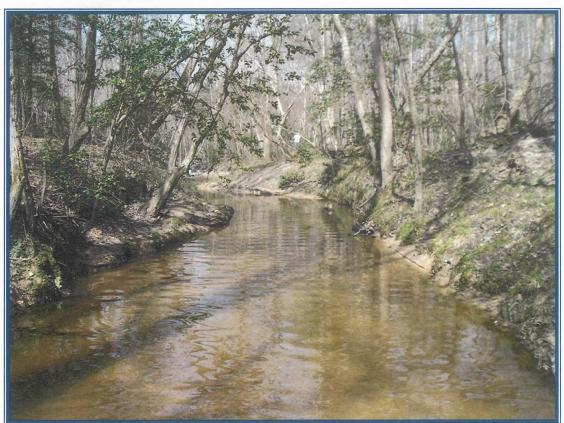
Figure 9



Supporting Document F



Assessment of the Biology, Habitat and Chemistry of Streams in the Upper Swift Creek Watershed, Chesterfield County, Virginia



Otterdale Creek near Clover Hill Athletic Park, Spring 2005

Chesterfield County Office of Water Quality

Compiled June 2006

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Executive Summary

This report presents the physical, chemical and biological water quality data collected by Chesterfield County's Office of Water Quality over the period of 2002 to 2005 focusing on the streams of the Upper Swift Creek Watershed. Over the past four years, 10 sites have been monitored and assessed in the Upper Swift Creek Watershed. Most recent biological assessments indicate that the majority of the streams investigated in the Upper Swift Creek Watershed are "Slightly Impaired." Declines in biological condition have been observed at Turkey Creek (B-002 and B-012), Tomahawk Creek (B-030) and Little Tomahawk Creek (B-010 and B-036). Bioassessment scores have improved at the Tributary to Swift Creek (B-011) over the past three years.

Habitat assessments since 2002 have demonstrated that the majority of the streams investigated in the Upper Swift Creek Watershed possess either "Partially Supporting" or "Non-Supporting" habitat. The most heavily impacted stream is Little Tomahawk Creek. Improved habitat assessment scores have been observed at four sites since 2002 (B-011, B-028, B-034 and B-035).

A comprehensive suite of chemical parameters has been collected since 2002 to provide a general water quality "snapshot" at the time the biological and habitat assessments are obtained. 0 For the past four years, instream measurements of dissolved oxygen, conductivity, total dissolved solids and temperature have been normal. Observations of pH have shown several streams to have values less than 6.0 units. Fecal coliform densities observed in the tributaries of the Upper Swift Creek Watershed have largely been below the Virginia State one-time sampling standard of 400 MPN/100ml. Most recent data (2005) indicates elevated phosphorus and nitrogen concentrations at six sites in the Upper Swift Creek Watershed (table 6).

An index of water quality using the biological data, habitat assessment and select chemical parameters was used to provide for an overall evaluation of stream health in the County. In 2005, poor water quality was present at both the upper (B-010) and lower (B-036) portions of Little Tomahawk Creek. The best water quality has been consistently observed at the Otterdale Branch site for the past three years. In 2005, improvements were noted at the Tributary to Swift Creek (B-010) site.

Introduction:

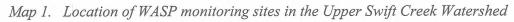
This report presents the physical, chemical and biological water quality data collected by Chesterfield County's Office of Water Quality over the period of 2002 to 2005 focusing on the streams of the Upper Swift Creek Watershed. As a component of Chesterfield County's VPDES Permit VA0088609, Watershed Assessment and Stream Protection (WASP) Program, investigations are conducted each spring throughout the County to assess the condition of its waters. Since this watershed-based approach to sampling began in 2002, sixty-three stream segments have been assessed.

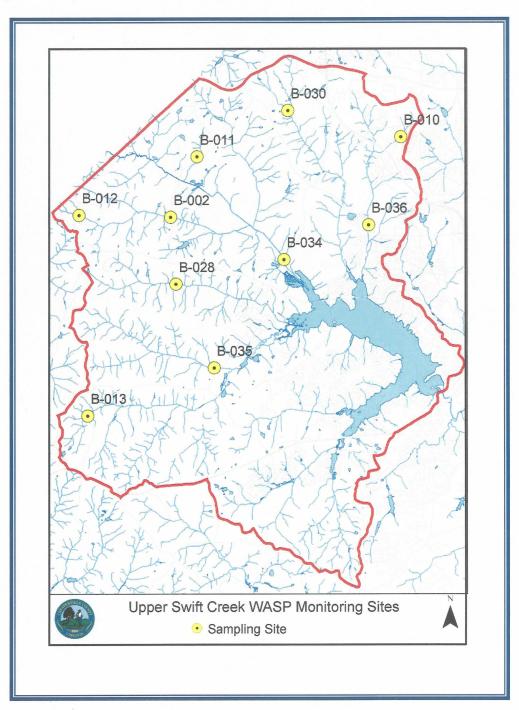
During this period, ten sites have been monitored and assessed in the Upper Swift Creek Watershed. Five of these sites have data for all four years while the others are represented by periods of one to three years. With the exception of sites B-035 and B-036, all streams in the Upper Swift Creek Watersheds have been used, in conjunction with streams in the Middle and Lower Swift Creek Watersheds, to compile a reference condition to which streams throughout the county can be compared.

These sites, as well as others in the program, were selected by a careful review of maps produced from the County's Geographic Information System. At each site, biological and habitat assessments followed the guidelines outlined in the Environmental Protection Agency's Revised Rapid Bioassessment Protocol (EPA, 1999). Physical and chemical water quality was determined by in stream measurements and laboratory analyses of collected samples. The aforementioned assessments and data have been used to produce an overall index of water quality for the streams of the watershed.

Table 1. Locations and years for which data is available for sites in the Upper Swift Creek Watershed

Site Number	Stream	Station Location	Years Monitored by OWQ
B-002	Turkey Creek	Upstream of Mount Hermon Road	2002 - 2004
B-010	Little Tomahawk Creek	Across from JTCC @Charter Colony Parkway	2002 - 2005
B-011	Tributary to Swift Creek	Downstream of Mount Hermon Road	2002 - 2005
B-012	Turkey Creek	Downstream of Mosley Road	2002 - 2003
B-013	Blackman Creek	End of Ledo Road	2002
B-028	Otterdale Branch	At Clover Hill Athletic Complex	2002 - 2005
B-030	Tomahawk Creek	Downstream of RR Crossing off Dry Bridge Road	2002 - 2005
B-034	Swift Creek	Downstream of Otterdale Road	2003 - 2005
B-035	Horsepen Creek	Upstream of Otterdale Road	2004 - 2005
B-036	Little Tomahawk Creek	At Old Hundred Road	2004 - 2005





Results:

The following pages describe each site and contain a summary of the observations made at each stream. Photos depict the upstream view of the site unless otherwise noted. Left and right banks are referenced from the perspective looking upstream.

Site Number B-002

Stream: Turkey Creek

Site: Immediately Upstream of Mount

Hermon Road

Watershed: Upper Swift Creek

Subwatershed: Turkey Creek

Approximate Drainage Area (acres): 1750

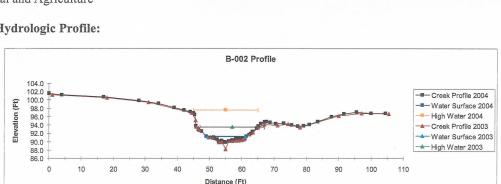
Stream Order: 2

Ecoregion: Triassic Basin (2)

Land Use: Mixed Forested, Low Density

Residential and Agriculture

Stream Hydrologic Profile:



Bioassessment:

In 2004 the site was categorized as "Moderately Impaired", a downgrade from the "Slightly Impaired" status observed in 2003. Decreases in assessment categories have been observed since 2002. A substantial increase in the proportion of Chironomidae taxa present in the sample, as well as decreases in predators contributed to the lower score observed in 2004. Aside from midges, other taxa well represented in the sample included small minnow mayflies (Baetidae) and Scuds (Cragonyx).

Habitat Assessment:

The assessment for 2004 indicated the stream exhibited "Non-Supporting" habitat. Unstable banks with little vegetative cover, combined with a narrow riparian zone width on both sides were the main reasons for the observed



score. A slight decrease in pool variability was also noted. Despite this assessment, the benthic macroinvertebrate community does not seem to have been substantially impacted.

Water Quality:

Stream pH (5.6 units) was below VADEQ's water quality standard (6.0 units). All other water quality analyses did not indicate any significant issues. Nutrient concentrations and fecal coliform densities were among the lowest observed during the spring sampling period.

Site Number B-010

Stream: Little Tomahawk Creek

Site: Charter Colony Parkway Across from John Tyler Community College

Watershed: Upper Swift Creek

Subwatershed: Little Tomahawk Creek

Approximate Drainage Area (acres): 200

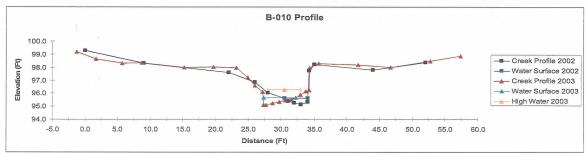
Stream Order: 1

Ecoregion: High River Terrace (1)

Landuse: Residential and Commercial;

New Construction

Stream Hydrologic Profile: Was not measured in 2004 or 2005 due to destruction of reference points.



Bioassessment:

The bioassessments have steadily decreased from "Slightly Impaired" in 2002/2003 to "Moderately Impaired" in 2004 to "Severely Impaired" in 2005. Declines in percent predators recovered, lack of taxa variability and increases in pollution tolerant organisms were the major reasons for the lower score. The greatest HBI score (7.2) was observed at this site. Overall numbers of macroinvertebrates recovered in the sample (n = 58) were sparse with segmented worms (Oligochaetes) and midges (Chironomidae) the most common taxa observed.

Habitat Assessment:

The degraded habitat ("Non-Supporting") observed in 2004 continued into 2005. This site possessed the lowest habitat assessment score (76) documented in 2005. The site has been significantly impacted by the construction of an apartment complex immediately adjacent to its banks. Loss of instream habitat, increased sedimentation, channel alteration, and encroachment into the riparian area were contributing factors.

Water Quality:

Ammonia (0.07 mg/L), nitrate/nitrite (0.20 mg/L) and total phosphorus (0.035 mg/L) concentrations were elevated in 2005. Total hardness (48.9 mg/l), total suspended solids (19 mg/L) and Biological Oxygen Demand (13.8 mg/L) values were the greatest observed at all sites. All other parameters were acceptable. Within each category, this site was the most impaired stream segment monitored during 2005.

Site Number B-011

Stream: Tributary to Swift Creek

Site: Downstream of Mount Hermon

Road

Watershed: Upper Swift Creek

Subwatershed: Upper Swift Creek

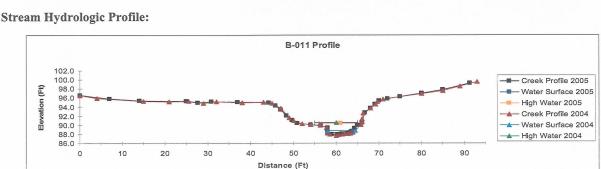
Approximate Drainage Area (acres): 730

Stream Order: 1

Ecoregion: Triassic Basin (2)

Landuse: Forested and Low Density

Residential



Bioassessment:

The bioassessment improved during 2005 from "Moderately Impaired" to "Slightly Impaired". Bioassessments at this site have improved each year from the "Severely Impaired" status noted in 2002/2003. Improved EPT taxa richness (14 taxa recovered) and greater percentage of predators recovered were most responsible for the observed increase in the 2005 assessment. Midges (Chironomidae), common netspinner caddisflies (Cheumatopsyche) and Baetidae mayflies were the most commonly encountered organisms.

Habitat Assessment:

The assessment score improved from the "Non-Supporting" condition observed in past years to "Partially Supporting" in 2004. Although poor bank stability and decreased vegetative bank cover remained present, improvements in epifaunal substrate/available cover, pool variability and channel flow status were recorded.

Adequate rainfall for the past two years have enabled this stream to rebound from the effects of the drought and may be the reason behind the improvements noted for the past two years.

Water Quality:

Slightly elevated concentrations of dissolved (0.057 mg/L) and total (0.081 mg/L) phosphorus were recorded. All other water quality analyses did not indicate any significant issues.

Site Number B-012

Stream: Turkey Creek

Site: Downstream Mosley Road

Watershed: Upper Swift Creek

Subwatershed: Turkey Creek

Approximate Drainage Area (acres):

140

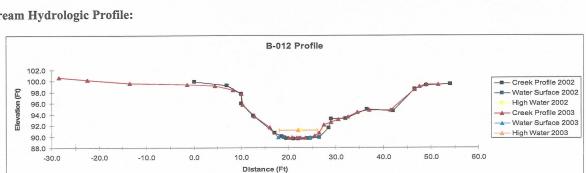
Stream Order: 1

Ecoregion: Triassic Basin (2)

Landuse: Forested and Low Density

Residential

Stream Hydrologic Profile:



Bioassessments:

Bioassessments declined from a "Moderately Impaired" status in 2002 to a "Severely Impaired" status during 2003. An overall loss of taxa richness and a decrease in the observed percent predator metric contributed to the downgraded category. Hilsenhoff Biotic Index scores were high for both years suggesting a biological community dominated by tolerant organisms. Predominant taxa included a variety of Chironomidae species, Amphipods (Cragonyx spp.) and the blackfly Simulium. Interestingly, perturbation sensitive macroinvertebrates as indicated by EPT richness were well represented for both years.

Habitat Assessment:

In stream habitat assessment scores indicated a "Non-Supporting" condition for both years. Poor bank stability, decreased vegetative bank cover and riparian zone width contributed to the low scores observed. Heavy erosion was obvious along both banks for extensive areas.

Water Quality:

pH values were slightly depressed during 2003 (5.5 units). All other analyses did not indicate any apparent problems with water quality.

Site Number B-013

Stream: Blackman Creek

Site: End of Ledo Road

Watershed: Upper Swift Creek

Subwatershed: Blackman Creek

Approximate Drainage Area (acres): 320

Stream Order: 1

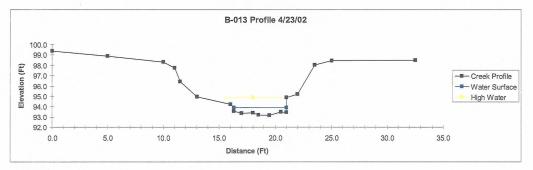
Ecoregion: Triassic Basin (2)

Landuse: Forested with Recent

Silvaculture

Stream Hydrologic Profile:





Bioassessments:

The monitoring conducted at Blackman Creek in 2002 was suspended in 2003 to allow for additional sites to be assessed in other watersheds. Bioassessments in 2002 indicated a "Non-Impaired" status. The site possessed high taxa richness and EPT taxa were abundant. Overall, benthic macroinvertebrate community structure was excellent and reflective of a well functioning stream system.

Habitat Assessment:

In stream habitat assessment scores indicated a "Partially Supporting" condition for 2002. Recent logging in the watershed and in the immediate area of the stream decreased the riparian zone width scoring and influenced the overall status.

Water Quality:

pH values were slightly depressed during 2003 (5.1 units). All other analyses did not indicate any apparent problems with water quality.

Site Number B-028

Stream: Otterdale Branch

Site: Behind Clover Hill Athletic

Complex

Watershed: Upper Swift Creek

Subwatershed: Otterdale Branch

Approximate Drainage Area (acres):

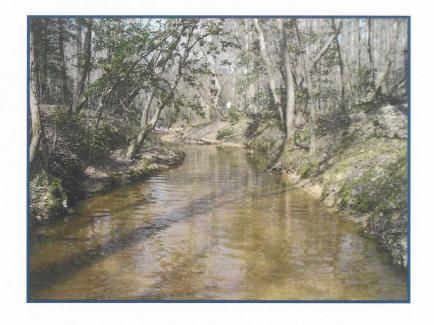
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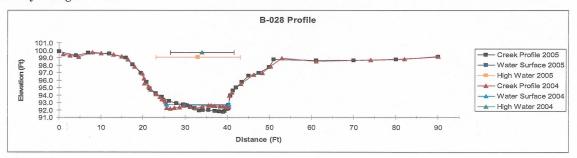
Stream Order: 2

Ecoregion: Triassic Basin (2)

Landuse: Forested, Ballfields, Park







Bioassessment:

The assessment remained unchanged from 2004 to 2005 and indicated a "Slightly Impaired" status. An increase in total taxa richness was noted as well as a slight improvement in the HBI score. EPT taxa richness continued to be strong. Decreases in the percent gatherer and predator taxa were observed. The most abundant macroinvertebrates in the sample included midges (*Chironimidae*), Blackflies (*Simulium*), and the mayflies *Acerpenna* and

Leptophlebia. The metric scores remained strong indicating a balanced and fully functional benthic macroinvertebrate community.

Habitat Assessment:

The instream habitat assessment score remained "Supporting" in 2005. Continued strong scores were noted within the substrate and instream cover and channel geomorphology sections. Additionally, the riparian and bank structure metrics scored well. A park road crossing immediately downstream of the site was under construction at the time of the survey.

Water Quality:

Ammonia nitrogen (0.05 mg/L), dissolved phosphorus (0.039 mg/L) and total phosphorus (0.055 mg/L) concentrations were slightly elevated. All other water quality chemistries were reflective of excellent water quality.

Site Number B-030

Stream: Tomahawk Creek

Site: Downstream of railroad crossing

off Dry Bridge Road

Watershed: Upper Swift Creek

Subwatershed: Tomahawk Creek

Approximate Drainage Area (acres):

1100

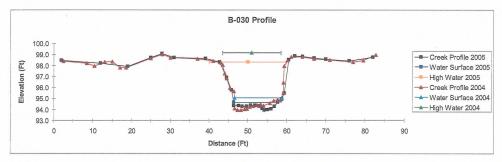
Stream Order: 1

Ecoregion: Triassic Basin (2)

Landuse: Forested



Stream Hydrologic Profile:



Bioassessment:

The bioassessment in 2005 decreased substantially from the "Slightly-Impaired" category observed for the past three years to a "Severely Impaired" status. During 2005, decreases were noted in total taxa richness and EPT taxa richness. A substantial increase in the percentage of collector/gather organisms, particularly Chironomidae

(n=1048, 90.8% of sample) was noted. Interestingly an increase in *Chironomidae* taxa has been observed over the past two years. Percent composition of predators and scrapers were lower than in 2004. Some other organisms present in order of abundance were worms (n=32), crayfish (n=26) and *Cheumatopsyche* caddisflies (n=15).

Habitat Assessment:

The instream habitat assessment declined from the "Comparable to Reference" score noted in previous years to a "Partially Supporting" condition in 2005. Decreases in metric scores within the substrate and instream cover section and lower flow conditions were the primary reasons for the observed decline.

Water Quality:

Increased nutrients were observed during 2005. Elevated concentrations of ammonia (0.04 mg/L), nitrate/nitrite nitrogen (0.25 mg/L) and total phosphorus (0.035 mg/L) were noted. The nitrogen values were similar to the 2004 concentrations while the total phosphorus level was lower

Site Number B-034

Stream: Swift Creek

Site: Downstream of Otterdale Road

Watershed: Upper Swift Creek

Subwatershed: Swift Creek

Approximate Drainage Area (acres):

13696

Stream Order: 4

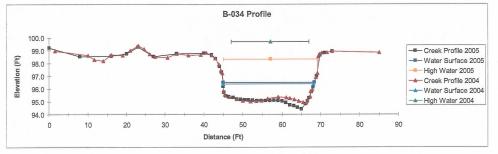
Ecoregion: Triassic Basin (2)

Landuse: Forested, Upstream Wetland

and Road Crossing

Stream Hydrologic Profile:





Bioassessment:

The bioassessment in 2005 continued to indicate the "Slightly Impaired" observed since 2003. While there were slight improvements in total taxa and EPT taxa richnesses, most all other metrics remained similar to prior years. For the second year in a row, a marked decrease in predator macroinvertebrates was recorded. Fauna well

represented in the sample included various *Chironomidae* species, flathead mayfly larvae (*Stenonema*), fingernail clams (*Pisidium*), and worms.

Habitat Assessment:

The instream assessment score remained "Partially Supporting" in 2005. Similar scores were observed for all metrics indicating little if any change in stream structure over the year.

Water Quality:

Dissolved (0.046 mg/L) and total (0.054 mg/l) phosphorus concentrations were elevated. All other water quality analyses did not indicate any significant issues. It should be noted that a Chesterfield County Department of Utilities Water Quality Monitoring station is immediately upstream of this site and may provide the interested reader with several years worth of detailed water quality data.

Site Number B-035

Stream: Horsepen Creek

Site: Upstream of Otterdale Road

Watershed: Upper Swift Creek

Subwatershed: Swift Creek

Approximate Drainage Area (acres): 2378

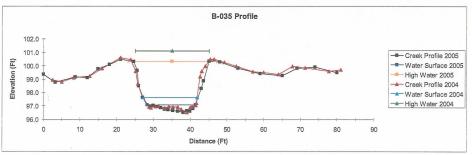
Stream Order: 3

Ecoregion: Triassic Basin (2)

Landuse: Forested

Stream Hydrologic Profile:





Bioassessments:

This site was added in 2004 in order to provided more detailed coverage of the Upper Swift Creek streams that have pending development in their watersheds. As in 2004, the bioassessment in 2005 indicated a "Slightly Impaired" status. The assessment score was precisely the same for both years (60.0). Moderate total taxa and EPT taxa richness values were observed. Hilsenhoff Biotic Index scores were low indicating a benthic community dominated by pollution sensitive taxa. Fauna well represented in the sample included *Chironomidae* taxa, blackfly larvae (*Simulium*), *Acerpenna* mayflies and the stonefly *Perlesta*.

Habitat Assessment:

The instream assessment score improved from the "Non-Supporting" condition observed in 2004 to a "Partially Supporting" status in 2005. Slight improvements were noted in the epifaunal substrate/available cover and the pool/substrate metrics.

Water Quality:

As in 2004, a slightly low pH (5.8 units) was observed at this site in 2005. Ammonia nitrogen (0.03 mg/L), dissolved phosphorus (0.030 mg/L) and total phosphorus (0.058 mg/L) concentrations were slightly elevated. All other water quality chemistries were reflective of good water quality. It should be noted that a Chesterfield County Department of Utilities Water Quality Monitoring station is immediately downstream of this site and may provide

the interested reader with several years

worth of water quality data.

Site Number B-036

Stream: Little Tomahawk Creek

Site: Adjacent to Holding Pond Lane

Watershed: Upper Swift Creek

Subwatershed: Swift Creek

Approximate Drainage Area (acres):

1539

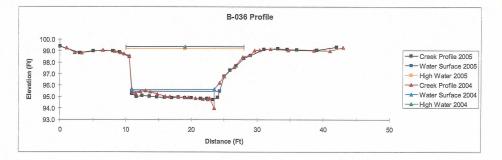
Stream Order: 3

Ecoregion: Triassic Basin (2)

Landuse: Residential, Forested

Stream Hydrologic Profile:





Bioassessment:

This site was added in 2004 in order to provided more detailed coverage of the Upper Swift Creek streams that have pending development in their watersheds. In 2005, the bioassessment declined from the "Moderately Impaired" status observed in 2004 to a 'Severely Impaired" condition. The total taxa richness value was the lowest among all

sites and no EPT organisms were observed. Only 63 individual macroinvertebrates were recovered in the sample. Hilsenhoff Biotic Index scores remained high indicating a benthic community dominated by pollution tolerant taxa. An increase in collector/gather organisms and a decrease in predators were noted. Scraper taxa, notably gastropods, were well represented.

Habitat Assessment:

The instream assessment score remained "Non-Supporting" in 2005, with conditions generally the same as those observed in 2004. Typical of creeks in the area, the stream's substrate is comprised largely of sand resulting in a general lack of instream habitat and cover for macroinvertebrates. The streams banks are not well vegetated and are prone to erosion during periods of high flow. Adequate flow was observed during the monitoring event. A large stormwater retention pond is located adjacent to the monitoring site.

Water Quality:

All water quality parameters in 2005 did not indicate any significant water quality issues. This is interesting given the fact that benthic macroinvertebrates were scarce at the time of sampling. Discussion:

Table 2 presents a summary of the bioassessment categories observed for the past four years. Most recent assessments (2005) indicate that the majority of the streams investigated in the Upper Swift Creek Watershed are "Slightly Impaired". "Non-Impaired" conditions have not been observed in the Upper Swift Creek Watershed since 2003. Declines in biological condition have been observed at Turkey Creek (B-002 and B-012), Tomahawk Creek (B-030) and Little Tomahawk Creek (B-010 and B-036). Common observations at these sites include a loss of taxa richness (the number of different animals recovered), decreases in sensitive species and increases in pollution tolerant organisms. An improvement in the biological condition has been observed at the Tributary to Swift Creek (B-011) over the past three years. Otterdale Branch (B-028), Swift Creek (B-024) and Horsepen Creek (B-035) have exhibited similar scores for the past few years.

Table 2. A summary of Bioassessment Categorical Scores observed in the Upper Swift Creek Watershed, 2002 – 2005

		Bioassessment Category				
Site	Stream	Severely	Moderately	Slightly	Non	
		Impaired	Impaired	Impaired	Impaired	
B-002	Turkey Creek		2004	2003	2002	
B-010	Little Tomahawk Creek	2005	2004	2002/2003		
B-011	Trib to Swift Creek	2002/2003	2004	2005		
B-012	Turkey Creek	2003	2002			
B-013	Blackman Creek				2002	
B-028	Otterdale Branch		2002	2004/2005	2003	
B-030	Tomahawk Creek	2005		2002/2003/2004		
B-034	Swift Creek			2003/2004/2005		

B-035	Horsepen Creek			2004/2005	
B-036	Little Tomahawk Creek	2005	2004		

Table 3 presents a summary of the habitat assessment categories observed for the past four years. Assessments since 2002 have demonstrated that the majority of the streams investigated in the Upper Swift Creek Watershed possess either "Partially Supporting" or "Non-Supporting" habitat. The most heavily impacted stream is Little Tomahawk Creek that has "Non-Supporting" habitat at both the upper and lower reach sites. Assessments on the upper reaches of the stream (Site B-010) have demonstrated continual loss of the habitat's supportive capabilities since 2003. Similar observations have also been made at the upper Tomahawk Creek site (B-030). Traits common among these sites included a loss or lack of available instream habitat, increased sedimentation, bank erosion and reduced riparian areas. Improved habitat assessment scores have been observed at four sites since 2002 (B-011, B-028, B-034 and B-035). Improvements in flow and quality of instream characteristics such as more frequent pools and increases in available habitat were factors in the observed changes.

Table 3. A summary of Habitat Categorical Scores observed in the Upper Swift Creek Watershed, 2002 – 2005

		Habitat Assessment Category			
Site	Stream	Non Supporting	Partially Supporting	Supporting	Comparable to Reference
B-002	Turkey Creek	2004	2002/2003		
B-010	Little Tomahawk Creek	2004/2005	2002	2003	
B-011	Trib to Swift Creek	2002/2003/2004	2005		
B-012	Turkey Creek	2002/2003			
B-013	Blackman Creek		2002		
B-028	Otterdale Branch		2002/2003	2004/2005	
B-030	Tomahawk Creek	2002	2005		2003/2004
B-034	Swift Creek	2003	2004/2005		
B-035	Horsepen Creek	2004	2005		
B-036	Little Tomahawk Creek	2004/2005			

A comprehensive suite of chemical parameters has been collected since 2002. These measurements are collected to provide a general water quality "snapshot" at the time the biological and habitat assessments are obtained. A more detailed long-term description of water quality in the Upper Swift Creek Watershed is available from the Department of Utilities' Source Water Monitoring Program (Swift Creek Reservoir) reports. For the past four years, instream measurements of dissolved oxygen, conductivity, total dissolved solids and temperature have yielded values that were within Virginia state water quality standards and

normally expected ranges. Observations of pH over the years has shown that several streams in the Upper Swift Creek Watershed are, or have been, acidic to the point of being less than the 6.0 unit standard set by the State of Virginia's Department of Environmental Quality.

Table 4. Streams in the Upper Swift Creek Watershed with pH values below Virginia DEQ standard of 6.0 units, 2002 - 2005

pH (units)	2002	2003	2004	2005
5.1	B-013			
5.2			B-011, B-035	
5.5		B-010, B-012		
5.6		B-011	B-002	
5.7		B-030		
5.8	B-028			B-035
5.9	B-010, B-011, B-012	B-002		

Fecal coliform densities observed in the tributaries of the Upper Swift Creek Watershed have largely been below the Virginia State one-time sampling standard of 400 MPN/100ml. Of the sites at which the values have been above this threshold, only the Tributary to Swift Creek (B-011) has exhibited multi-year violations (Table 5).

Table 5. Sites at which fecal coliform densities were \geq 400 MPN/100m, 2002 – 2005. Asterisks denote no violations

		Fecal Coliform Dens	sity (Most Proba	ble Number/1	(00ml)
Site	Stream	2002	2003	2004	2005
B-010	Little Tomahawk Creek	*	*	500	*
B-011	Trib to Swift Creek	*	1600	≥1600	*
B-030	Tomahawk Creek	*	*	≥1600	*

Nutrient concentrations as measured by total/dissolved phosphorus and ammonia/nitrate nitrogen have varied among sites over the past four years. Most recent data (2005) indicate elevated phosphorus and nitrogen concentrations at six sites in the Upper Swift Creek Watershed (table 6).

Table 6. Elevated nutrient concentrations observed in the Upper Swift Creek Watershed, Spring 2005

Site		2005 Nutrient Concentrations (mg/L)			
	Stream	Total Phosphorus	Dissolved Phosphorus	Ammonia Nitrogen	Nitrate/Nitrite Nitrogen
B-010	Little Tomahawk Creek	0.035		0.07	0.20

B-011	Trib to Swift Creek	0.081	0.057		
B-028	Otterdale Branch	0.055	0.037	0.05	
B-030	Tomahawk Creek	0.035		0.04	0.25
B-034	Swift Creek	0.054	0.046		
B-035	Horsepen Creek	0.058	0.03	0.03	

Typically, total suspended solids measurements at the time of sampling within the Upper Swift Creek Watershed have been less than 20 mg/L. The greatest total suspended solids concentrations observed have occurred at the upper Little Tomahawk Creek site (19.0 mg/L, 2005), Tomahawk Creek (25 mg/L, 2004) and the Tributary to Swift Creek (26 mg/L, 2004). Since 2002, the majority of Biological Oxygen Demand determinations have been less than 3.0 mg/L. The greatest BOD value recorded in the Upper Swift Creek Watershed has been 13.8 mg/l and occurred at the upper Little Tomahawk Creek site (B-010) in 2005. Hardness measurements during the past four years have indicated soft water (<85 mg/L as CaCO₃) throughout the Upper Swift Creek Watershed.

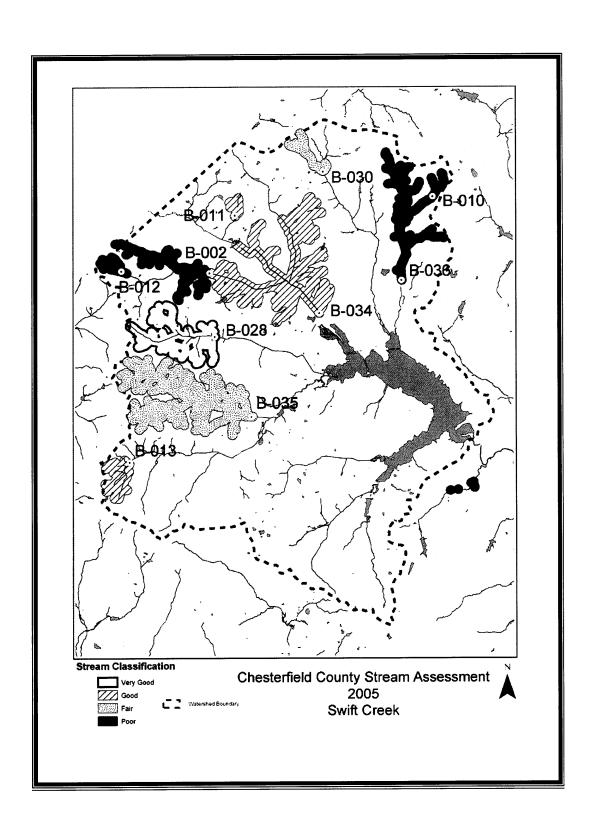
An index of water quality using the biological data, habitat assessment and select chemical parameters was developed to provide for an overall evaluation of stream health in the County. The chemical parameters used were those that possessed a Virginia State Water Quality Standard (pH, Dissolved Oxygen and Fecal Coliform). The index generated a numerical score that corresponded to a level of quality for the stream segment. The results of the analysis are outlined in table 7 and are reflective of all monitored streams in the watershed for the period of 2002 to 2005. A map depicting the most recent assessments is presented on the following page (Map 2).

In 2005, poor water quality was present at both the upper (B-010) and lower (B-036) portions of Little Tomahawk Creek. While chemical water quality was relatively good at these sites, "Severely Impaired" biological communities combined with "Non-Supporting" habitats were the reasons for the assessment. The upper (B-012) and lower (B-002) reaches of Turkey Creek also were evaluated as having poor water quality in 2004 and 2003 respectively. Once again, biology and habitat were the deciding factors. The best water quality has consistently been observed at the Otterdale Branch site for the past three years. In 2005, improvements were noted at the Tributary to Swift Creek (B-010) site.

Table 7. Categorical scores of the index of water quality analysis, 2002 - 2005

	Water Quality Category					
Site	Stream	2002	2003	2004	2005	Most Recent Assessment
B-002	Turkey Creek	Very Good	Fair	Poor	*	Poor
B-010	Little Tomahawk Creek	Fair	Good	Poor	Poor	Poor
B-011	Trib to Swift Creek	Poor	Poor	Poor	Good	Good
B-012	Turkey Creek	Poor	Poor	*	*	Poor
B-013	Blackman Creek	Good	*	*	*	Good
B-028	Otterdale Branch	Fair	Good	Very Good	Very Good	Very Good
B-030	Tomahawk Creek	Fair	Good	Very Good	Fair	Fair
B-034	Swift Creek	*	Fair	Good	Good	Good
B-035	Horsepen Creek	*	*	Fair	Fair	Fair
B-036	Little Tomahawk Creek	*	*	Fair	Poor	Poor

Map 2. Most recent water quality assessments of WASP monitoring sites in the Upper Swift Creek Watershed



References:

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Supporting Document G

Upper Swift Creek Watershed - Riparian Buffer Analysis

The Upper Swift Creek Watershed, which is approximately 34,560 acres, contains 100 miles of perennial streams as determined by field verification. The one hundred foot resource protection area (RPA), which is protected by the Chesapeake Bay Act, contains approximately 2450 acres. This 100-foot riparian buffer was analyzed in GIS by overlaying the buffer with 2002 aerial photography. Several land cover categories were determined. The categories are: forested, grass/scrub, residential, wetland/marsh, impervious/paved, or golf course. The following figure depicts a percentage breakdown of land within the buffer.

Figure 1.Percentage of land cover categories within riparian buffer

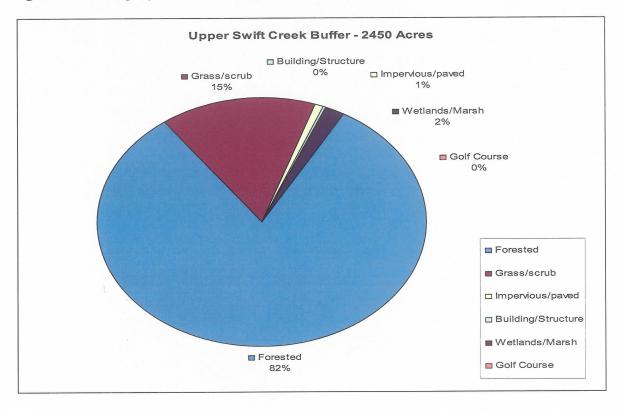


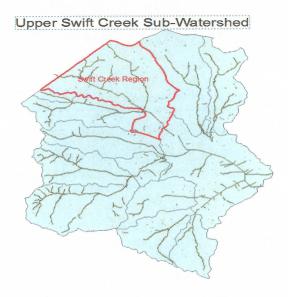
Figure 2. Land cover categories in acres

Category	Acreage
Forested	1994
Grass/scrub	377
Paved surfaces	19
Buildings	8.5
Wetlands/marsh	43
Golf course	3
Total	2450

Sub-watershed Analysis:

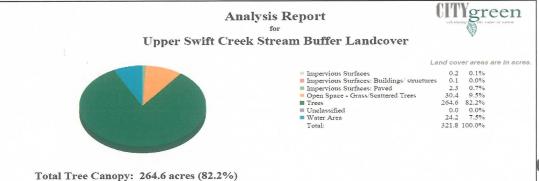
Ecosystem services can be calculated based on land cover area provided by the forested area using CITYgreen analysis software. We have not analyzed the entire Upper Swift Creek Watershed but we have assessed the Swift Creek (Figure 3) sub watershed, which is approximately 5427 acres. The results are impressive.

Figure 3. Swift Creek Region



The CITY green report shows a significant economical and ecological resource provided by the trees in the riparian buffer for the Swift Creek region. Sections of the report are included in figures 4-6.

Figure 4. – The report shows the percentage land cover in the riparian buffers for the Swift

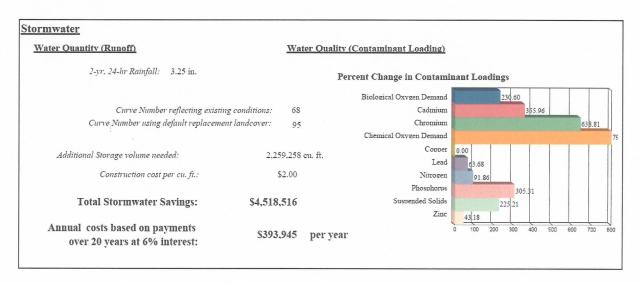


Creek region.

Figure 5. – The report shows the air pollution removal in pounds and value of the pollution removal by trees in the buffer.

Nearest Air Quality Reference	City: Washington DC	Lbs. Removed/yr	Dollar Value
	Carbon Monoxide:		
		1,179	\$503
	Ozone;	9.198	\$28,260
	Nitrogen Dioxide:	4,717	\$14,492
	Particulate Matter:	7,783	\$15,965
	Sulfur Dioxide:	3,774	\$2,832
	Totals:	26,652	\$62,052
arbon Storage and Sequ	<u>estration</u>		
		Total Tons Stored:	11,385.7
	Total Tons	Sequestered (Annually):	88.64

Figure 6. – The report shows the positive affect of the trees in the riparian buffer on water quality. The figures are based on the land without tree coverage. For example, with no trees in the buffer the total stormwater savings would be zero dollars. But with 82% tree coverage in the buffer the county saves more than 4.5 million dollars based on storm water maintenance costs.



It is important to keep in mind that the report above only analyzes 321 acres of riparian buffers which accounts for only six percent of land cover in the Swift Creek sub-watershed of the Upper Swift Creek Watershed. Even with the small amount of coverage this report shows the potential savings, both economically and ecologically, are enormous.

Land Cover Change Analysis:

CITY green also allows users to analyze potential future changes in land cover. The user can specify land coverage percentages and the program will report changes in water and air quality as well as economic values. For example, the county may be considering new developments or agriculture expansion in the Upper Swift Creek area that affect land cover. The program then allows us to determine the impacts of the development by changing the percentage of land cover. Therefore, based upon the prior percentages in *figure 4*, we shifted the land cover percentages to make crop lands account for 26%, decreased the tree cover to 33%, and increased open space or grass cover to 30% to create a hypothetical situation if development occurred. In turn, the land cover changes allow us to see the impact on water and air quality. The results were impressive. With the decrease in tree cover from 82% to 33%, the stormwater savings decreased from \$4.5 million in *figure 2* to \$2 million (see figure 7).

Figure 7. – Stormwater Example – The report shows the significant loss of water quality due to a decrease in tree cover.

rmwater Air Pollution Removal			
Nearest Air Quality Reference City: Washington DC		Lbs. Removed/yr	Dollar Value
	Carbon Monoxide:	472	\$201
	Ozone:	3,679	\$11,304
	Nitrogen Dioxide:	1,887	\$5,797
	Particulate Matter:	3,113	\$6,386
	Sulfur Dioxide:	1,509	\$1,133
	Totals:	10,661	\$24,821
Carbon Storage and Se	questration		
		Total Tons Stored:	4,554.2
	Total Tons Sequestered (Annually):		35.4

Figure 8. – Analysis shows a significant loss of air pollution removal.

Although these numbers are remarkable they do not tell the whole story. The CITYgreen program that creates these reports is formatted for general land covers, not riparian areas. Therefore, it likely that riparian land covers have a more drastic impact on water quality than the CITYgreen software indicates. Besides pollution removal riparian forests also serve to maintain

stream temperatures through shading, stabilize the stream banks, and provide erosion control. In addition, CITYgreen does not calculate the economic impact of cleaner water on recreation, the fishing industry or drinking water filtration. Simply put, the numbers generated by CITYgreen are likely on the low end in terms of ecological services and the dollar value of the services.

Page break

TECHNICAL MEMORANDUM

Construction Site Sediment and Total Phosphorus Loading

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DATE:

August 15, 2005

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Introduction

Chesterfield County staff and residents are concerned that the extensive planning involved with managing the Upper Swift Creek Reservoir watershed will be rendered ineffective by large amounts of construction-related sediment and associated total phosphorus (TP). During a previous study of the watershed, the Watershed Management Master Plan and Maintenance Program for the Swift Creek Reservoir Watershed (CH2M HILL, 2000), a simple modeling exercise was used to estimate the annual construction sediment and phosphorus load to the reservoir. The results indicated up to 8,000 tons per year of sediment and 798,000 pounds per year of TP could be released by construction activities.

CH2M HILL has been contracted to conduct a more refined assessment of construction-related loads within the reservoir. The purpose of this technical memorandum (TM) is to describe the approach to and the results of estimating sediment load and TP load generated by construction activity within the Upper Swift Creek Reservoir watershed in Chesterfield County, Virginia. The assessment was conducted in three main steps.

- 1. Compute soil loss for two pilot sites, with and without erosion and sediment control, and determine average annual soil loss per acre based on the results from the two pilot sites
- 2. Apply the average annual soil loss to the Swift Creek Reservoir watershed based on land anticipated to be developed within each tributary watershed
- 3. Determine sediment load delivered to Swift Creek Reservoir based on standard sediment delivery ratios and extrapolate the associated TP load

The result of this analysis was an estimation of the annual amount of sediment and TP reaching the reservoir from construction-related activities.

The remainder of this TM describes the three steps in the analysis, the results, and provides conclusions about how these results impact the previous watershed management plans.

Soil Loss

Pilot Sites

Two pilot sites were selected by the County to represent the range of development potential within the reservoir watershed. Figure 1 shows the locations of the two pilot sites.

The Cosby Road High School site is a 63-acre site dedicated to a high school and associated support facilities. It was selected to represent typical commercial and institutional sites, where significant site grading would be required to create level land needed for the facility. The site was modified to reduce the existing 5 to 10 percent slopes to nearly flat slopes for use in constructing the school and associated parking lots and sport fields.

The Millcrest at the Brandermill site is an 8-acre section of an existing subdivision. It was selected as a representative plan for residential development. Site grading is limited to creating roads and infrastructure, with limited modification to the residential lots.

Soil Loss Computations

Soil loss during construction was computed using the Revised Universal Soil Loss Equation, Version 2 (RUSLE2), a computer program developed by the U.S. Department of Agriculture — Agricultural Research Service and Natural Resource Conservation Service (NRCS) to estimate soil erosion due to rainfall and runoff. The program was developed to examine erosion due to agricultural activities; however, it is also applicable to construction activity due to the significant land disturbance involved. RUSLE2 is frequently used to estimate erosion for preparing erosion and sediment control plans for construction sites.

FIGURE 1 Location of Pilot Sites RUSLE2 is based on the USLE equation, and automates the computation of coefficients reflecting regional climate, land slope, slope length, soil type, and land management, as follows:

$$a_i = r_i k_i l_i Sc_i p_i$$

where, all on the ith day:

 \mathbf{a}_i = average annual soil loss

 r_i = erosivity factor

 \mathbf{k}_i = soil erodibility factor

li = soil length factor

S =slope steepness factor

 \mathbf{c}_i = cover-management factor

 p_i = supporting practices factor

Land slope and slope lengths were computed for each drainage area defined in the erosion and sediment control plan. Both existing and proposed slopes were evaluated to determine the range of soil loss rates. The drainage areas, slope lengths, and slope steepness for each subbasin for the two pilot sites are summarized in Appendix A. According to the construction plans, the soils at the Millcrest site are dominated by Mayodan gravelly sandy loam at a 12 to 20 percent slope (soil type 151D). Based on the site location and County soil maps, the soils at the Cosby Road High School site are dominated by Mayodan gravelly sandy loam at a 2 to 6 percent slope (soil type 151B).

County-specific climate and soils data were available from the NRCS online database (NRCS, 2005) and are directly accessed by the RUSLE2 computer program. Land management parameters are associated with conservation tillage and crop rotation activities. These are not applicable to construction activities, as land is assumed to be bare during construction. The default construction management inputs were selected, which equate to no vegetation or conservation activities (c_i =1, p_i =1). Erosion and sediment controls were considered in a separate analysis.

The results from RUSLE2 for the two pilot sites indicate that the average annual soil loss rate will range from 7 to 33 tons per acre per year. The results for individual drainage areas for both proposed and existing site grading are provided in Appendix A. The results of this first step assume that the entire site is disturbed throughout the year and that no erosion and sediment control practices were used.

Erosion and Sediment Control

The sediment control devices proposed on the two pilot construction sites included sediment basins and sediment traps. Literature values from the Center for Watershed Protection were used to determine the percent removal of sediment from the runoff. These values are summarized in Table 1 for the two practices used on the pilot sites, and several additional practices for reference.

The reported average percent reduction was applied to the soil loss from the drainage area served by each device and summed to determine the total sediment load discharged from each site with sediment controls. The reduced soil loss rate ranges from 2 to 13 tons per acre per year, when sediment control devices are included. The results of individual drainage areas for both proposed and existing site grading are provided in Appendix A.

Other potential sediment control devices that could be considered include silt fence and hay bales. These were not proposed on the pilot sites and are not included in this analysis. These devices are typically used on small areas of disturbance, but tend to be less effective than sediment basins and traps. Although these devices can have significant localized impacts, it was assumed that from a watershed basis, the variation resulting from these devices was within the range of uncertainty of the results.

Erosion controls include temporary seeding of dormant areas, tarps over staging piles, and sod or seeding of completed grading. It was determined that the most effective means of approximating the impacts of erosion control measures was in the amount of time over which land was assumed to be bare, which was taken into account in the extrapolation of soil loss rates to the watersheds.

TABLE 1
Percent Reduction in Sediment Load Due to Erosion and Sediment Controls

Device	Low	High	Average
Sediment Basin	55	100	70
Sediment Trap	-7	100	60
Filter Fabric Fence	0	100	70
Vegetative Filter Strip	20	80	70
Seeding (after vegetative establishment)	50	100	90
Sod	98	99	99

Source: EPA, 1993

Sediment and Total Phosphorus Delivery

Sediment Delivery

Once the annual soil loss rate was calculated for 1 acre of land disturbed for an entire year, the results could be applied to construction throughout the watershed. Developable area was calculated for each tributary watershed based on the existing 2004 land use and the build-out land use plans developed to assess the future Upper Swift Creek Land Use Plan. Annual average area disturbed was calculated by dividing developable area by the period of development, 25 years. Average sediment load was then calculated by multiplying the annual area disturbed by the soil loss rates calculated in Section 2 and by the fraction of the year a typical area remains disturbed. A factor of 0.75 was used in this analysis, meaning the typical area is disturbed for 9 months. Table 2 summarizes the annual area disturbed and resulting soil loads for each tributary watershed.

TABLE 2
Total Sediment Load from Proposed Development by Tributary Watershed
Upper Swift Creek Plan Modeling Support

Tributary Watershed	Total Area Disturbed (ac/yr)	Annual Average Area Disturbed (ac/yr)	Annual Sediment Load no ESC (ton/yr)	Annual Sediment Load with ESC (ton/yr)
Little Tomahawk Creek	1,229	49.2	260 – 1,220	80 - 490
Tomahawk Creek	2,017	80.7	420 – 2,000	140 - 800
Swift Creek / Turkey Creek System	4,640	185.6	970 – 4,600	310 – 1,840
Otterdale Creek	1,543	61.7	320 – 1,530	100 – 610
Blackman Creek / Horsepen Creek / Deep Creek System	5,446	217.8	1,140 – 5,400	370 – 2,160
Dry Creek	1,044	41.8	220 – 1,040	70 – 410
West Branch	674	26.9	140 – 670	50 – 270
Fuqua Creek	769	30.7	160 – 760	50 – 300
Direct Runoff Component	947	37.9	200 – 940	60 – 380
Total	18,310	732.4	3,830 – 18,160	1,230 – 7,260

Notes:

Total area disturbed is for Chesterfield County only. Land disturbance upstream in Powhatan County is not included in this study.

ESC = erosion and sediment controls

The average sediment load is the sediment leaving disturbed areas in construction sites. It is not the amount of sediment reaching the reservoir. A large percentage of the sediment load that is dislodged from the land is removed from the tributary flow prior to reaching the reservoir, primarily due to settling during overland and in-channel flows. One method of determining the fraction of sediment load that reaches the reservoir is the application of a sediment delivery ratio (SDR). The SDR used for this study is based on the NRCS National Engineering Handbook (SCS, 1983). Section 3, Chapter 6 of the National Engineering Handbook presents the SDR as a curve in Figure 6-2. A recent study by U.S. Environmental Protection Agency (EPA) Region 4 (Greenfield, 2001) converts the curve to the following formula:

$$SDR = 0.417762A^{-0.134958} - 0.127097$$

where A is the watershed area in square miles.

Most of the reservoir's tributaries drain directly to the reservoir and are independent of each other. The best approach to determine the portion of sediment load that reaches the reservoir is to calculate separate SDRs for each tributary. Turkey Creek is included in the Swift Creek system.

Blackman Creek is included in the Horsepen Creek/ Deep Creek system. Table 3 includes the tributary watershed areas and their corresponding SDRs. Note that the Swift Creek system only includes that part of the watershed within Chesterfield County.

Applying the tributary SDRs to the average sediment dislodged from the surface results in the sediment loads that are predicted to be delivered to the reservoir each year. These loads are included in Table 4.

TABLE 3
Tributary Watershed Sediment Delivery Ratios
Upper Swift Creek Plan Modeling Support

Tributary Watershed	Drainage Area (sq. miles)	SDR
Little Tomahawk Creek	3.70	0.223
Tomahawk Creek	5.67	0.203
Swift Creek / Turkey Creek System	21.76	0.149
Otterdale Creek	3.86	0.221
Blackman Creek / Horsepen Creek / Deep Creek System	11.58	0.173
Dry Creek	3.06	0.232
West Branch	2.90	0.235
Fuqua Creek	2.38	0.245
Direct Runoff Component	7.03	0.194

As an example, this paragraph carries a single watershed through the analysis. Dry Creek is predicted to have 1,044 acres of developed land, which equates to an average of 41.8 acres of land developed per year over the 25-year development horizon. Of this, 41.8 acres times 33.06 ton/ac/yr without erosion and sediment control (ESC) times 0.75 (the portion of year land disturbed) results in 1,036 tons of sediment dislodged from the surface. Using the SDR for Dry Creek, 1,036 tons per year times 0.232 results in 240 tons of sediment delivered to Swift Creek Reservoir per year.

TABLE 4
Sediment Delivery to Upper Swift Creek Reservoir
Upper Swift Creek Plan Modeling Support

Tributary Watershed	Sediment Delivery no ESC (ton/yr)	Sediment Delivery with ESC (ton/yr)
Little Tomahawk Creek	60 – 270	20 – 100
Tomahawk Creek	90 – 410	30 – 160
Swift Creek / Turkey Creek System	140 – 680	50 – 270
Otterdale Creek	70 – 340	20 – 140
Blackman Creek / Horsepen Creek / Deep Creek System	200 – 930	60 - 370
Dry Creek	50 – 240	20 – 100
West Branch	30 – 160	10 – 60
Fuqua Creek	40 – 190	10 – 70
Direct Runoff Component	40 – 180	10 – 70
Total	720 – 3,400	230 – 1,350

Phosphorus Delivery

Sediment in runoff is a known source of TP. If one can determine the relationship between sediment and TP, then the construction sediment loads delivered to the reservoir can be used to predict the accompanying TP load. The Chesterfield Department of Utilities has established instream monitoring stations for each of the main tributaries. These monitoring stations are typically located in the lower part of each tributary watershed, in a reach that has little or no influence from reservoir tailwater.

CH2M HILL used the monitoring data collected from 1974 to 1997 to calculate the ratio between total suspended solids (TSS) and TP. The average TSS/TP ratio was calculated from wet weather flow data from the nine monitoring stations. Base flow data was not included in the calculations. The average TSS/TP ratio was 1,009. The resulting TP loads delivered to the reservoir is summarized in Table 5.

TABLE 5Total Phosphorus Delivery by Tributary Watershed *Upper Swift Creek Plan Modeling Support*

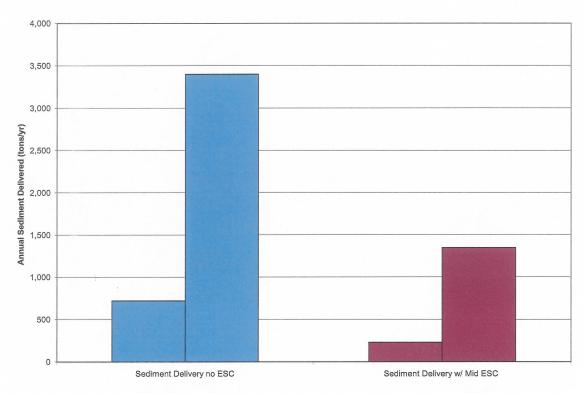
Tributary Watershed	TP Delivery no ESC (lb/yr)	TP Delivery with ESC (lb/yr)
Little Tomahawk Creek	120 – 540	40 – 220
Tomahawk Creek	180 – 810	60 - 320
Swift Creek / Turkey Creek System	280 – 1350	100 – 540
Otterdale Creek	140 – 670	40 – 280
Blackman Creek / Horsepen Creek / Deep Creek System	400 – 1840	120 – 730
Dry Creek	100 – 480	40 – 200
West Branch	60 - 320	20 – 120
Fuqua Creek	80 – 380	20 – 140
Direct Runoff Component	80 – 360	20 – 140
Total	1,440 – 6,750	460 – 2,690

Conclusion

A typical year in the watershed could see the delivery of 720 to 3,400 tons per year of sediment from unprotected construction sites. Erosion and sediment controls are predicted to reduce the annual load to between 230 and 1,350 tons per year. The actual load reaching the reservoir is probably somewhere between the two ranges. This is due to a number of factors, including portions of projects that are not protected by erosion and sediment controls, the challenge of properly maintaining the control facilities, and the occurrence of larger storms that exceed the design capacity of the controls. The amount of sediment predicted to reach the reservoir is significantly less than the 8,000 tons per year, as estimated in 1999. The differences between the two estimates can be explained by different techniques, development periods, and TSS/TP ratios. If the County can maintain good erosion and sediment controls, then the predicted TP delivery to the reservoir is 460 to 2,780 pounds per year. The Management Plan and updated modeling both point to the required goal in the range between 25,000 and 26,000 pounds of TP per year at projected build out of the watershed. In terms of annual TP loading goal, the TP associated with construction sediment is approximately 2 to 11 percent of the annual goal for the reservoir. Without erosion and sediment controls, the range is 1,500 to 6,970 pounds per year, or approximately 6 to 27 percent of the annual goal.

Based solely on annual loading rates, the current assimilative capacity of the reservoir should be able to accommodate the additional TP from construction sites if erosion and sediment controls are properly installed and maintained (Figure 2). In time, this could become an issue if erosion and sediment controls are not properly installed. However, the timely establishment of the BMPs identified in the Management Plan will further reduce the construction site TP load reaching the reservoir.

FIGURE 2
Summary of Annual Sediment Loads Due to Construction
Upper Swift Creek Reservoir Watershed Management Plan



One issue that has not been examined to date is the impact of the sediment that settles to the bottom of the reservoir. Based on the annual TP loading rate and annual volume of runoff, the Reckhow Model does not explicitly calculate the cumulative effects of the sediment and associated TP deposited on the bottom of the reservoir. This sediment will be a potential TP source for years to come, particularly as the reservoir stratifies each summer.

Another issue to consider is stream health. The sediment delivery ratios for each of the tributary watersheds range from 17 to 25 percent. The converse is that 75 to 83 percent of the sediment leaving construction sites does not reach the reservoir and is instead deposited during overland flow, and largely on stream bottoms. The result is a probable loss of habitat for many of the benthic macroinvertabrates and other fauna.

The County's Watershed Assessment and Stream Protection Program (WASP) is dedicated to "preserve, protect, and restore the ecological integrity of the County's streams and other water resources." The portion of the sediment load deposited in the tributaries will require additional management from the WASP.

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Appendix A

TABLE A-1Milcrest RUSLE2 Input Data and Results
Upper Swift Creek Plan Modeling Support

Existing	Condition	1					
	Area, ac	Slope Length, ft	Slope, ft/ft	Soil Loss Rate, Tons/Ac/Yr	Soil Loss, Tons/yr	E&SC TSS Removal, % (Avg)	Soil Loss w/ ESC (Mid)
ST-1	2.3	180	0.100	35	81	60	32
ST-2	2.8	250	0.088	32	90	60	36
ST-3	1.3	190	0.094	32	42	60	17
ST-4	1.5	150	0.100	33	50	60	20
Total	7.9			33	261	ton/yr	104
						ton/ac/yr	13
Propose	ed Condition	on					
	Area, ac	Slope Length, ft	Slope, ft/ft	Soil Loss Rate, Tons/Ac/Yr	Soil Loss, Tons/yr	E&SC TSS Removal, % (Avg)	Soil Loss w/ ESC (Mid)
Area A	1.08	130	10.4	33	36	60	14
Area B	0.66	150	8.7	26	17	60	7
Area C	1.4	158	8.9	27	38	60	15
Area D	0.85	170	7.4	23	20	60	8
Area E	0.52	160	6.3	18	9	60	4
Area F	1.34	120	9	25	34	60	13
Area G	0.3	50	10	22	7	60	3
Area H	0.3	60	10	23	7	60	3
Area I	0.27	20	10	16	4	60	2
Area J	0.35	30	10	18	6	60	3
Total	7.07			25	177	ton/yr	71
						ton/ac/yr	10
Range acro	Range across site conditions w/o ESC					T/Ac/y	
Range acro	oss site condition	ons w/ ESC			0 to 35	T/Ac/y	
Average ac	cross site cond	itions w/o ESC	;		29.1	T/Ac/y	
Average ac	cross site cond	itions w/ ESC			12	T/Ac/y	

TABLE A-2
Cosby High School RUSLE2 Input Data and Results
Upper Swift Creek Plan Modeling Support

	Area, ac	Slope Length, ft	Slope, ft/ft	Soil Loss Rate, Tons/Ac/Yr	Soil Loss, Tons/yr	E&SC TSS Removal, % (Avg)	Soil Loss w/ ESC (Mid)
SB1	8.05	490		26	209	70	63
SB2	5.69	670	0.051	21	119	70	36
SB3	9.55	535	0.080	36	344	70	103
SB4a	8.33	480	0.054	21	175	70	52
SB4b	4.16	230	0.087	30	125	70	37
SB5	9.85	450	0.100	26	256	70	77
ST1	1.50	290	0.079	29	44	60	17
ST2	2.00	340	0.077	30	60	60	24
ST3	1.80	170	0.073	22	40	60	16
ST4	1.30	190	0.071	22	29	60	11
ST5	1.50	340	0.035	12	18	60	7
ST6	1.80	280	0.060	20	36	60	14
ST7	1.49	290	0.088	34	51	60	20
ST8	0.80	200	0.075	26	21	60	8
Total	57.82			26	1526	ton/yr	487
						ton/ac/yr	8

	Area, ac	Slope Length, ft	Slope, ft/ft	Soil Loss Rate, Tons/Ac/Yr	Soil Loss, Tons/yr	E&SC TSS Removal, % (Avg)	Soil Loss w/ ESC (Mid)
SB1	5.90	400	0.038	13	77	70	23
SB2	3.46	180	0.019	5	17	70	5
SB3	11.24	380	0.017	4.9	55	70	17
SB4a	10.60	390	0.034	12	127	70	38
SB4b	5.30	260	0.023	6.7	36	70	11
SB5	7.48	160	0.013	3.3	25	70	7
ST1	2.90	230	0.015	4	12	60	5
ST2	2.90	230	0.015	4	12	60	5

TABLE A-2Cosby High School RUSLE2 Input Data and Results
Upper Swift Creek Plan Modeling Support

ST3	2.90	490	0.020	6.2	18	60	7
ST4	2.00	170	0.020	5.3	11	60	4
Propo	sed Co	nditions	3				
	Area, ac	Slope Length, ft	Slope, ft/ft	Soil Loss Rate, Tons/Ac/Yr	Soil Loss, Tons/yr	E&SC TSS Removal, % (Avg)	Soil Loss w/ ESC (Mid)
ST5	2.00	260	0.014	3.7	7	60	3
ST6	1.39	300	0.028	8.7	12	60	5
ST7	1.50	80	0.029	7	11	60	4
ST8	1.50	30	0.033	6.5	10	60	4
ST9	2.00	420	0.020	6.1	12	60	5
Total	63.07			7.0	440	ton/yr	142
						ton/ac/yr	2
Range across site conditions w/o ESC					7 to 26	T/Ac/y	
Range across site conditions w/ ESC				0 to 15	T/Ac/yr		
Average	across site	e conditions	w/o ESC	;	17	T/Ac/y	
Average	across site	e conditions	w/ ESC		5	T/Ac/yr	

Supporting Document I

Education & Outreach Program Introduction:

The Education and Outreach Program plays an important role in the Office of Water Quality. An informed citizenry is one of most important tools in maintaining and improving water quality. As more citizens move into Chesterfield County, our environmental resources are impacted by the increase in impervious surfaces; storm flows and lawn care practices. The Education and Outreach Program can be categorized in the following areas: general, targeted and volunteer activities. General education and outreach occurs on a daily basis as staff interacts with the public. All staff members utilize the OWQ publications and website as tools. The OWQ receives over 1000 citizen requests per year. Other general outreach occurs by participating in events such as Earth Day Celebrations, attending homeowner's association meetings and water quality monitoring day. Targeted outreach focuses on a specific audience or a specific issue. Local educators are an example of a targeted audience that the Office of Water Quality often serves. Other targeted outreach topics have included neighborhoods that exhibit high levels of nutrients, specific watersheds with issues and perennial flow determination with the private environmental community. Finally, volunteer activities are available for citizens who show an interest in the environment and water quality and want to actively participate in a program. These programs include citizen monitoring, storm drain marking and cleanup efforts.

General Education & Outreach: Publications:

The Office of Water Quality developed the Water Quality Watch Fact Sheet series in 1997 for general outreach and education that describe a variety of surface water quality issues in Chesterfield County. The purpose of the fact sheets is to promote awareness of Chesterfield's water bodies, water quality problems, and measures the county is taking to address these problems. The fact sheets target both the general population as well as the business community. In addition to the original series, the Resource Protection Area Restoration Guide was created in 2004. This guide includes step-by-step instructions on the proper restoration of a riparian zone that has been disturbed. This guide contains information about Resource Protection Areas (RPAs), planting guidelines as well as an approved plant list. The manual and plant list was developed with input from representatives of the Chesapeake Bay Local Assistance Department, The Virginia Department of Forestry, and Chesterfield County. The manual was developed as a part of a Small Watershed Grant from the Fish & Wildlife Foundation. A series of "Fast Enviro-Facts" fact sheets was also created in 2004 to answer questions commonly asked by citizens. These fact sheets addressed issues such as iron bacteria blooms, foam in creeks and why tree tubes are important in RPA plantings. The Office of Water Quality partners with several other organizations for publications. For proper lawn care techniques relating to water quality, the Chesterfield County Cooperative Extension Service provides numerous brochures and fact sheets. The Friends of Chesterfield's Riverfront publishes a brochure with public access points to water and the Friends of the Lower Appomattox River recently developed a similar publication for the Appomattox River. The Office of Water Quality has found much success in partnering with other organizations for the development & publication of print and internet resources. Several other publications are available from the Office of Water Quality, but are discussed in the "Targeted Education & Outreach Section". A list of all water quality publications can be found in the table on the following page.

ial	Type	Lead Group	Target Group
Chesterfield County Office of Water Quality website: http://www.chesterfield.gov/communitydevelopment/waterquality/	Website	Office of Water Quality	General public
Chesterfield County Resource Protection Area Restoration Guide	Booklet	Office of Water Quality	General public
Chesterfield County Resource Protection Area Restoration Guide Chesterfield County Stormwater Management Program Chesapeake Bay Resource Protection Areas The Streams of Chesterfield County Homeowners Guide to Flood Plain Management Business & Industry Guide to Chesterfield County's Illicit Discharge Ordinance Household Guide to Chesterfield County's Illicit Discharge Ordinance Chesterfield County's Stormwater Drainage System	Fact Sheet	Office of Water Quality	General public
What is this Orange Slime in my Creek? What is this Foam in my Creek? What are those Tubes in the Field?	Fast Enviro Facts Sheet	Office of Water Quality	General public
Pocochsock Creek Community Partnership	Brochure	Office of Water Quality	Watershed Citizens
Don't Feed the Lake	Brochure	Office of Water Quality	Citizens who live near lakes
Storm Drain Markers	Plastic marker adhered to storm drains	Office of Water Quality	General public
<u>EcoMasters</u>	Interactive CD	Office of Water Quality	6 th grade lead science teachers
Watersheds & Water Quality in Chesterfield County	Power Point Presentation	Friends of Chesterfield's Riverfronts	6 th grade students
<u>Chesterfield Extension Website:</u> <u>http://www.chesterfield.gov/HumanServices/ExtensionServices/exthome.asp</u>	Website	Chesterfield Extension	General Public
Six Steps to Cleaner Water (lawn & home)	Brochure	Chesterfield Extension	General Public
Home Landscape Practices to Protect Water Quality	Brochure	Chesterfield Extension	General Public
Chesterfield County - Did you Know? (Fact sheet on lawn care)	Fact Sheet	Chesterfield Extension	General Public
Lawn Care Clinics (5 clinics in addition to being online)	Power Point Presentation	Chesterfield Extension	Interested Public

Website:

The Chesterfield County Office of Water Quality website, which can be found at http://www.chesterfield.gov/communitydevelopment/waterquality, also serves as a valuable tool for general education & outreach. The above-mentioned publications are available online in a PDF format, as well as general water quality information, technical reports and staff contacts. Many citizens utilize the website to gather information related to various ordinances or to view water quality data.

Activities:

The Office of Water Quality staff participates in many activities that serve as general outreach and education. These activities range from appearing on local cable television shows to participating in regional educational events such as earth day and Virginia Water Quality Monitoring Day. Written press is another general educational outlet use at both the local and regional level. Staff also responds to citizen inquiries, both via the telephone and by making field visits. The staff also will attend various civic meetings as requested such as homeowner association meetings.

Targeted Education & Outreach:

Targeted education & outreach occurs for several reasons. There may be a specific audience, such as local educators, that are seeking specific information. Another type of targeted education & outreach occurs as a result of a situation or event. The Perennial Determination Workshop would be an example of this type of targeted education. Whatever be the case, targeted education & outreach is very valuable and results are often immediate and measurable after the education event occurs.

Educator Training:

The Office of Water Quality, in partnership with Friends of Chesterfield's Riverfront plays an active role with the Chesterfield Public School System. Both organizations work with the Science Lead Instructors in developing curriculum, the grants administrator in securing funding and one on one with teachers. Each year, the OWQ and Friends trains teachers in water related SOLs at teacher in-service workshops. These organizations also assist teachers in developing Chesterfield related lessons regarding water quality and give advise on local field trips. Thousands of dollars have been secured in grant funding to assist the CCPS with water quality education. One example of a recent grant was the 3-year BayScaping initiative funded by NOAA-B-WET. This grant funded the installation of a native BayScape at all elementary & middle schools in the county as well as curriculum development on how to utilize the areas as a meaningful watershed experience (MWE). In addition to technical expertise and grant funding, the OWQ also loans equipment to teachers to enhance their curriculum. The Enviroscape, which depicts non-point pollution and water quality monitoring equipment are among the most popular

items on loan. By working with the local educators, the OWQ is able to reach perhaps the largest and most important audience in Chesterfield County, the youth.

Targeted Watersheds: Pocoshock Creek:

The Office of Water Quality performs physical, chemical and biological stream sampling in its comprehensive monitoring program, the Watershed Assessment and Stream Protection Program. From this collection of data, stream segments are then categorized into general health parameters ranging from "bad" to "excellent". After identifying the health of the stream and its watershed, management strategies are applied. Pocoshock Creek was identified as having "poor" health and a Detailed Watershed Investigation was conducted in 2004 to identify the areas of concern. To complement the scientific monitoring and investigation, an educational & outreach component was developed. The "Pocoshock Creek Community Partnership" was formed as a mechanism to communicate with the community members of the watershed, including homeowners and businesses. A brochure was developed and published with funds from the Virginia Department of Conservation and Recreation for this target audience that identifies the limits of the watershed and steps they can take to improve water quality.

Don't Feed the Lake:

Every water source in Chesterfield County is valuable, but our drinking water sources are especially valuable. A publication titled "Don't Feed the Lake" was developed in the late 1980's to inform citizens on how their lawn care practices could affect the water quality of the reservoir. This publication was updated and revised with funds from the Virginia Division of Chesapeake Bay Local Assistance. The development of this brochure was a partnership of the OWQ, the Cooperative Extension Office and the Friends of Chesterfield's Riverfront. This brochure also has a link to a "Clean Lakes" website hosted by the extension office that provides additional information to interested citizens.

Perennial Steam Determination Workshop:

This workshop was a result of the 2001 revisions to the Chesterfield County Chesapeake Bay Preservation Area Designation and Management Regulations that required field determinations of perennial streams. After the adoption of these revised regulations, the Office of Water Quality identified an area of concern: the inconsistent application of the protocols developed for use in conducting field determinations of water bodies with perennial flow. While workshops and training sessions had been conducted to train staff from localities on the use of these protocols, there had yet to be a training opportunity in Virginia for the consultants who, in most cases, actually perform the determinations. To address this "gap" in training, Chesterfield County's Office of Water Quality conducted a Perennial Stream Determination Workshop in August 2005. Funding was provided by the Virginia Division of Chesapeake Bay Local Assistance. Dr. James Gregory from the North Carolina State University and the author of the North Carolina Stream Identification Protocol provided detailed training on the use of this field indicator method both

the classroom and in the field. Larry Eaton of the North Carolina Division of Water Quality will also assisted by providing training on benthic macro invertebrates. This four-day workshop had 41 attendees from both the private sector as well as localities. Results were immediately noticed by the staff.

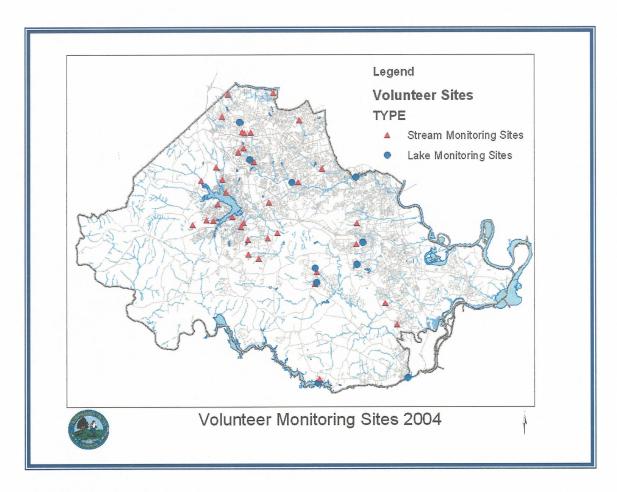
Volunteer Activities:

Volunteering in an Office of Water Quality program is an excellent way for a citizen to be able to "do something" for the environment. Volunteering can take several forms — either in the form of a long term commitment through water quality monitoring or during one time events such as cleanups and plantings. Both types of volunteering foster a sense of pride in our citizenship and encourage those citizens to take a personal role in their environment.

Volunteer Monitoring:

The volunteer monitoring data are currently being used to complement the data being collected as a part of the annual bioassesments, field monitoring and storm drain screenings. Objectives of the volunteer monitoring programs are to:

- Enhance public education activities and promote stewardship
- Involve a cross-section of County citizens
- Complement the monitoring requirements of the County's VPDES permit
- Provide a team of citizen "stream watchers" who can identify water quality improvements or degradation in their community



Stream Watchers:

Approximately 30 citizens monitored a total of 20 stream segments. These stream segments were located in 4 or the 10 major watersheds in Chesterfield County. This data is compiled in a database for trending and comparison of physical parameters are reported in the "Stream Watcher Annual Report".

Lake Monitoring:

6 lakes participated in the Volunteer Lake Monitoring Program for the 2005 growing season (April 2005 – October 2005). These lakes are located in 4 of the 10 major watersheds in Chesterfield County. This data is compiled in a database for trending and comparison of physical and chemical parameters and can be found in the "Volunteer Lake Monitoring Annual Report".

Friends of Chesterfield's Riverfront Chemical Monitoring:

The Friends of Chesterfield's Riverfront is currently administering a chemical monitoring volunteer program with technical support from the Alliance for the Chesapeake Bay. Currently six

(6) sites are being chemically tested every week by a team of 14 volunteers. These sites were selected with input from OWQ. One of the volunteers enters data for the group and acts as the QA/QA. Data is housed in the Alliance for the Chesapeake Bay database and all data is accepted by the DEQ.

Volunteer Cleanup Efforts:

The OWQ actively participates in the James River Regional Cleanup, hosted by the James River Advisory Council. This event takes place the second weekend of June and attracts over 300 citizens in Chesterfield County. The county offers 3 -4 sites in various locations along the James River and its tributaries for citizens. Over 300 bags of trash were removed by the volunteers at this one day event. The OWQ also hosts targeted stream cleanups as the need arises. For example, a community cleanup was held along Pocoshock Creek after staff identified an illegal dumping area. Local businesses of the watershed donated lunches and citizens from the watershed attended the event.

Volunteer Riparian Buffer Plantings:

Riparian buffers are among one of the most valuable resources in protecting water quality. Unfortunately, many riparian buffers have been altered and are not functioning to their full potential. Several riparian buffers in Chesterfield County have been restored with the aid of volunteers. These projects were funded by a Chesapeake Bay Small Watershed Grant and volunteers performed the actual planting with the aid of Maters Gardeners for planting quality. In addition to these sites performing an ecological function, they also have educational signage and are located at parks for maximum educational visibility.

Volunteer Riparian Buffer Monitoring:

The Volunteer Riparian Buffer Monitoring program is the newest volunteer program and was implemented in May 2006. This program tracks the progress of restored riparian buffers in the county. Funds have been secured for this program from a National Fish and Wildlife Foundation Chesapeake Bay Small Watershed Grant. Organizations will adopt a riparian buffer and make yearly surveys, gather plant survival data and take photographs.

Storm Drain Marking:

The Storm Drain Marking Program was piloted by purchasing two thousand markers with funding from the Chesapeake Bay Small Watershed Grant administered by the National Fish and Wildlife Foundation. These markers include the name of the river, stream or reservoir to which the area drains as well as the anti-pollution message of "No Dumping!" and the County's illicit discharge hotline number. After a successful pilot period, Chesterfield County received a second grant to purchase an additional 10,500 markers and expand the program countywide. Various groups have participated in this program including local schools, shopping centers and scout groups. When utilized as a scout project, an "educational component" is encouraged. The scout

is encouraged to research nonpoint source pollution and develop educational materials for the community. These activities will not only educate the citizens and build communication skills for the youth, but also ensure success in markers being left on the storm drains. To date, approximately 3000 markers have been applied in over 400 neighborhoods. This covers six of the ten major watersheds in Chesterfield County.

Upper Swift Creek:

All of the above mentioned categories of education and outreach would be valuable to implement in the Upper Swift Creek, but a targeted education & outreach approach with a strong volunteer base would have the greatest impact. Publications and programs should be developed to specifically address the challenges and issues of the Upper Swift Creek Watershed, stressing the importance of protecting the Swift Creek Reservoir as a primary drinking water source. The citizens of this watershed should have a heightened awareness of the watershed in which they live and their personal effects on the water quality. This can be accomplished by working the various audiences. Several ideas include: working with the CCPS to develop a special curriculum for schools in the USC, develop a county-sponsored volunteer program specifically for watershed residents and to encourage homeowners associations to include water quality measures such as RPA language in their covenants. The citizens of the Upper Swift Creek Watershed need to feel that they are supported and encouraged by Chesterfield County in their efforts to maintain and improve the environmental resources.

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Subdivision & Utility Ordinance Amendments – Mandatory Water & Wastewater

AN ORDINANCE TO AMEND THE <u>CODE OF THE COUNTY</u>
<u>OF CHESTERFIELD</u>, 1997, AS AMENDED, BY AMENDING
AND RE-ENACTING SECTIONS 17-72, 17-84, 18-63 AND 18-64 RELATING TO
MANDATORY SEWER AND WATER CONNECTIONS IN THE
UPPER SWIFT CREEK PLAN AREA

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That Sections 17-72, 17-84, 18-63 and 18-64 of the <u>Code of the County of Chesterfield</u>, 1997, as amended, is amended and re-enacted to read as follows:

000

Sec. 17-72. Improvements--Required.

000

(k) Connection to the county water supply system shall be required in any of the following circumstances except as may be waived by the planning commission per County Code section 18-63:

000

(7) When a lot is located within the area of the Upper Swift Creek Plan and suggested for any use other than Deferred Growth, unless residential zoning was obtained for such subdivision prior to (date of adoption).

000

(n) Connection to the county wastewater supply system shall be required in any of the following circumstances except as may be waived by the planning commission per County Code section 18-64:

 $0 \ 0 \ 0$

(7) When a lot is located within the area of the Upper Swift Creek Plan and suggested for any use other than Deferred Growth, unless residential zoning was obtained for such subdivision prior to (date of adoption).

000

Sec. 17-84. Standards for lots and parcels served by onsite sewage disposal systems.

000

(g) No subdivision of land within the Upper Swift Creek Plan for which residential zoning is obtained after (date of adoption) may utilize onsite wastewater disposal systems unless all lots in such subdivision are at least one acre in size.

000

Sec. 18-63. Mandatory water connections in certain areas.

000

- (e) All structures which are located on property that is included in the Upper Swift Creek
 Plan and suggested for any use other than Deferred Growth and which received zoning
 approval after (date of adoption) shall connect to the water system. However, the
 following structures shall not be required to connect unless connection to the water
 system is otherwise required by law:
 - (1) Temporary manufactured or mobile homes;
 - (2) Structures that were authorized by conditional uses or special exceptions which were renewed after (date of adoption);
 - Structures that are authorized by conditional uses or special exceptions that were granted after (date of adoption) if the use that is permitted by the conditional use or special exception is incidental to a principal use that was previously allowed with a private well;
 - (4) Governmental structures and institutional buildings; and
 - (5) Residences that are located on lots that are exempt from the requirements of the subdivision ordinance.
- (e) (f) For purposes of this section "structure" and "institutional building" shall have the same meaning as in the zoning ordinance
- (f) (g) The planning commission may grant exceptions to subsections (b) and (c) during schematic plan, site plan or tentative subdivision review. The planning commission may also grant exceptions to subsections (b), (c), and (d) and (e) to an applicant who files an application with the planning department on a form prescribed by the director of planning and who pays a fee of \$260.00 to the planning department, if the applicant is not subject to the schematic, site plan or subdivision review process. The planning commission shall find that:
 - (1) The use of a private well will not adversely affect the ability to extend public water to other property;

- (2) The use of a private well will not encourage future development that is inconsistent with the comprehensive plan; and
- (3) The use of a private well is not reasonably likely to adversely affect the public health, safety or welfare.

The planning commission may impose conditions to mitigate the impact of any exception that it grants.

Sec. 18-64. Mandatory wastewater connection in certain areas.

000

- All structures which are located on property that is included in the Upper Swift Creek
 Plan and suggested for any use other than Deferred Growth and which received zoning
 approval after (date of adoption) shall connect to the wastewater system. However, the
 following structures shall not be required to connect unless connection to the wastewater
 system is otherwise required by law:
 - (1) Temporary manufactured or mobile homes;
 - (2) Structures that were authorized by conditional uses or special exceptions which were renewed after (date of adoption);
 - Structures that are authorized by conditional uses or special exceptions that were granted after (date of adoption) if the use that is permitted by the conditional use or special exception is incidental to a principal use that was previously allowed with a septic system;
 - (4) Governmental structures and institutional buildings; and
 - (5) Residences that are located on lots that are exempt from the requirements of the subdivision ordinance.
- (d) (e) For purposes of this section, "structure," "single-family dwelling" and "institutional building" shall have the same meaning as in the zoning ordinance.
- (e) (f) The planning commission may grant exceptions to subsections (a), (b), and (c) and (d) during schematic plan, site plan or tentative subdivision review. The planning commission may also grant exceptions to subsections (a), (b), and (c) and (d) to an applicant who files an application with the planning department on a form prescribed by the director of planning and who pays a fee of \$260.00 to the planning department, if the applicant is not subject to the schematic, site plan or subdivision review process. The planning commission shall find that:
 - (1) The use of an on-site disposal system will not adversely affect the ability to extend public wastewater sewer to other property;
 - (2) The use of an on-site disposal system will not encourage future development that is inconsistent with the comprehensive plan; and

(3) The use of an on-site disposal septic system is not reasonably likely to adversely affect the public health, safety or welfare.

The planning commission may impose conditions to mitigate the impacts of any exception that it grants.

(2) That these ordinances shall become effective immediately upon adoption.

Subdivision & Utility Ordinance Amendment – Prohibition of Water & Wastewater in the Deferred Growth Area

AN ORDINANCE TO AMEND THE <u>CODE OF THE COUNTY</u>
<u>OF CHESTERFIELD</u>, 1997, AS AMENDED, BY ENACTING
SECTIONS 17-72.1, 18-64.1 and 18-64.2 OF THE
SUBDIVISION AND UTILITY ORDINANCES RELATING
TO UTILITIES IN THE UPPER SWIFT CREEK PLAN.

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That Sections 17-72.1, 18-64.1 and 18-64.2 of the <u>Code of the County of Chesterfield</u>, 1997, as amended, are enacted to read as follows:

000

Sec. 17-72.1 Improvements--Prohibited.

- (a) All structures which are located on property that is included in the Upper Swift Creek Plan and suggested for the Deferred Growth area shall be prohibited from connecting to the county water system, to any non-governmental public water system, or to any private water supply system designed to serve more than one lot.
- (b) All structures which are located on property that is included in the Upper Swift Creek Plan suggested for the Deferred Growth area shall be prohibited from connecting to the county wastewater system, to any non-governmental public wastewater system, or to any private wastewater supply system designed to serve more than one lot.

000

Sec. 18-64.1. Prohibited water connections in certain areas.

All structures which are located on property that is included in the Upper Swift Creek Plan and suggested for the Deferred Growth area shall be prohibited from connecting to the county water system, to any non-governmental public water system, or to any private water supply system designed to serve more than one lot.

Sec. 18-64.2. Prohibited wastewater connection in certain areas.

All structures which are located on property that is included in the Upper Swift Creek Plan suggested for the Deferred Growth area shall be prohibited from connecting to the county wastewater system, to any non-governmental public wastewater system, or to any private wastewater supply system designed to serve more than one lot.

(2) That this ordinance shall become effective immediately upon adoption.

Zoning Ordinance Amendment – Buffers

AN ORDINANCE TO AMEND THE <u>CODE OF THE COUNTY</u> <u>OF CHESTERFIELD</u>, 1997, AS AMENDED, BY AMENDING AND RE-ENACTING SECTIONS 19-520, 19-522 and 19-523 OF THE ZONING ORDINANCE RELATING TO BUFFERS

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That Sections 19-520, 19-522 and 19-523 of the <u>Code of the County of Chesterfield</u>, 1997, as amended, is amended and re-enacted to read as follows:

Secs. 19-520. Purpose and intent.

(a) Buffers shall be designed to provide a horizontal distance and open space between certain uses; preserve vegetation; provide transition and separation; reduce noise and glare; and/or maintain privacy, and/or preserve existing forested vistas adjacent to arterial roads. Buffers shall provide intermittent visual separation between uses.

000

Secs. 19-522. Buffer and screening requirements.

(a) Buffers: Buffers shall be provided as shown on the buffer width matrixes in section 19-523. Landscaping shall be accomplished within required buffers as follows:

000

(5) A 200-foot buffer shall consist of an unbroken strip of open space and shall be planted at three times the density of perimeter landscaping C.

000

Secs. 19-523. Buffer width matrix.

(a) Buffers between adjacent properties: The required width of buffers shall be determined from the following matrix. The left column of the matrix represents the zoning of the lot on which the buffer must be provided and the top column of the matrix represents the zoning district of property contiguous to the zoning lot. The interior numbers in the matrix represent the width in feet of the required buffer on the zoning lot. However, whenever the primary use on a parcel zoned O,

C or I is a single family residential subdivision, adjacent parcels shall be required to apply the buffer matrix below as though the property is residentially zoned.

BUFFER WIDTH MATRIX

	A*	R-7/88 R-TH/R-MF MH Districts
A*	+	+
R-7/88		
13-7700	' 	50**
R-TH/R-MF		50**
MH Districts		40
0-1	+	50
O-2	+	40
C-1	+	50
C-2	+	75
C-3	+	75
C-4	+	100
C-5	100	100
I-1	100	100
I-2	100	100
I-3		

*Note: In all zoning districts expect industrial zoned districts, buffers are only required adjacent to property zoned "A" when the property is vacant and its designation on the comprehensive plan is for residential uses. Property zoned I-1 through I-3 require a buffer when adjacent to property zoned "A" that is occupied by a residential use or the property is designated on the comprehensive plan for residential use.

**Note: Where property zoned R-7 through R-88 is adjacent to property zoned R-TH, R-MF, or MH, a buffer shall be required on the R-TH, R-MF, or MH property. No buffers are necessary between any single-family residential districts unless required by the board of supervisors, planning commission (modification to development standards and requirements only) or board of zoning appeals.

<u>b.</u> <u>Buffers adjacent to streets: The required width of buffers shall be determined from the following matrix.</u>

	Arterial Streets	
Upper Swift Creek Plan area		
<u>R-7/88/R-TH</u>	200	

Other areas R-7/88/R-TH	<u>50</u>	
	Collector Streets	
<u>R-7/88/R-TH</u>	35	
	Residential Collector Streets	
R-7/88/ R-TH	30	
	Local streets to negate double frontage condition	
<u>R-7/88/R-TH</u>	20	

(2) That this ordinance shall become effective immediately upon adoption.

Subdivision Ordinance Amendment - Buffers

AN ORDINANCE TO AMEND THE <u>CODE OF THE COUNTY</u> <u>OF CHESTERFIELD</u>, 1997, AS AMENDED, BY AMENDING AND RE-ENACTING SECTIONS 17-62, 17-70 AND 17-83 OF THE SUBDIVISION ORDINANCE RELATING TO BUFFER CONDITIONS IN THE UPPER SWIFT CREEK PLAN

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That Sections 17-62, 17-70 and 17-83 of the <u>Code of the County of Chesterfield</u>, 1997, as amended, are amended and re-enacted to read as follows:

Sec. 17-62. Standard conditions.

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(h) Any required buffers are subject to the requirements of section 17-70 (a) and (b).

000

Sec. 17-70. Buffers and Special Setbacks.

- (a) Buffers and special setbacks outside the Upper Swift Creek Plan geography, or within the Upper Swift Creek geography for lots which have a tentative plat approved prior to (date of adoption).
 - 1. (a) For lots which have a tentative plat approved after February 27, 2001, buffers shall be exclusive of easements which are generally parallel to the buffer, required setbacks and street cut and fill slopes, and shall be preserved in an undisturbed condition unless otherwise approved by the director of planning. Easements crossing buffers shall generally be at right angles or shall cross the buffer so as to have the least impact to the buffer.
 - 2. (b) Post construction vegetation within the buffer shall meet a standard of not less than one and one half times the perimeter yard landscaping "C" quantity requirements as defined in County Code section 19-518 prorated for every 25 feet of depth. If insufficient vegetation exists within the buffer as determined by the director of planning, the subdivider shall submit a landscape plan to the director of planning for review and approval prior to release of the final check plat review comments. The subdivider shall install the required plant material prior to recordation. If conditions do not exist for good plant survival as determined by the

director of planning, surety shall be provided to the county in the amount sufficient to guarantee the installation approved by the director of planning and in a form as indicated in section 17-73(a). The planning department shall hold any required surety. Any such installation shall be completed prior to state acceptance of the subdivision's streets.

- 3. (e) Buffers of the following minimum width shall be provided adjacent to existing and proposed streets with the following classifications:
 - a. (1) Arterial streets--50 feet.
 - b. (2) Collector streets--35 feet.
 - c. (3) Residential collector streets--30 feet.
 - <u>d.</u> (4) Local streets to negate double frontage condition--20 feet.
- 4. (d) Adjacent to limited access streets, a setback distance of 200 feet, exclusive of required yards, shall be provided from the limited access street right-of-way, unless a noise study demonstrates that a lesser distance is acceptable as approved by the director of transportation. Natural vegetation shall be retained within the setback area unless removal is required to install noise attenuation measures or is approved by the planning commission.
- <u>5. (e)</u> Setbacks from temporary turnarounds easements shall conform to permanent cul-de-sac right-of-way standards.
- 6. (f) A minimum setback for all structures of 20 feet shall be provided from any petroleum product transmission pipeline easement or 35 feet from the pipeline whichever is greater.

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- (b). Buffers and special setbacks within the Upper Swift Creek Plan geography for lots which have a tentative plat approved after (date of adoption).
 - (1) For lots which have a tentative plat approved after (date of adoption), buffers shall be exclusive of easements which are generally parallel to the buffer (except for buffers along arterial streets which shall allow within the buffer a maximum of 100 feet of total easement width generally parallel to the buffer, so long as easements are located a minimum of 25 feet from subdivision lot lines), required setbacks and street cut and fill slopes, and shall be preserved in an undisturbed condition unless otherwise approved by the director of planning. Easements crossing buffers shall generally be at right angles or shall cross the buffer so as to have the least impact to the buffer.

- Post construction vegetation within the buffer shall meet a standard of not less than one and one half times the perimeter yard landscaping "C" quantity requirements as defined in County Code section 19-518 prorated for every 25 feet of depth. If insufficient vegetation exists within the buffer as determined by the director of planning, the subdivider shall submit a landscape plan to the director of planning for review and approval prior to release of the final check plat review comments. The subdivider shall install the required plant material prior to recordation. If conditions do not exist for good plant survival as determined by the director of planning, surety shall be provided to the county in the amount sufficient to guarantee the installation approved by the director of planning and in a form as indicated in section 17-73(a). The planning department shall hold any required surety. Any such installation shall be completed prior to state acceptance of the subdivision's streets.
- (3) Buffers of the following minimum width shall be provided adjacent to existing and proposed streets with the following classifications:
 - (a) Arterial streets--200 feet.
 - (b) Collector streets--35 feet.
 - (c) Residential collector streets--30 feet.
 - (d) Local streets to negate double frontage condition--20 feet.
- (4) Adjacent to limited access streets, a setback distance of 200 feet, exclusive of required yards, shall be provided from the limited access street right-of-way, unless a noise study demonstrates that a lesser distance is acceptable as approved by the director of transportation. Natural vegetation shall be retained within the setback area unless removal is required to install noise attenuation measures or is approved by the planning commission.
- (5) Setbacks from temporary turnarounds easements shall conform to permanent cul-de-sac right-of-way standards.
- (6) A minimum setback for all structures of 20 feet shall be provided from any petroleum product transmission pipeline easement or 35 feet from the pipeline whichever is greater.

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Sec. 17-83. Minimum requirements.

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- (c) If a subdivision borders on or contains an existing or proposed arterial or collector street, the director of transportation may require the subdivider to limit access to said street(s) requiring a local street design utilizing a series of cul-desacs and/or loop streets. The lots shall only be entered from such a local street, and a buffer as required in section 17-70 (a) or section 17-70 (b) shall be provided along the lot lines adjacent to the arterial or collector street.
- (2) That this ordinance shall become effective immediately upon adoption.



Chesterfield County, Virginia

Memorandum

DATE:

JULY 3, 2007

TO:

CHESTERFIELD COUNTY PLANNING COMMISSION

FROM:

RICHARD MCELFISH,

DIRECTOR OF ENVIRONMENTAL ENGINEERING

SCOTT FLANIGAN,

WATER QUALITY MANAGER

SUBJECT:

PROPOSED AMENDMENT TO ORDINANCES RELATING TO WATER

OUALITY IN THE UPPER SWIFT CREEK WATERSHED

The Planning Commission scheduled a public hearing for July 19, 2006 to discuss the attached proposed amendment relating to water quality in the Upper Swift Creek Watershed. The watershed consists of land in the county located upstream of the Swift Creek Reservoir Dam. The proposed amendment will promote development standards that are consistent with the protection of critical natural systems within the watershed and facilitate the county's water quality goals for area streams and the Swift Creek Reservoir.

The proposed amendment would require that the post-development total phosphorus load for all land uses within the watershed, except agricultural practices, shall not exceed 0.16 pounds per acre per year. Vested developments would not be affected. This new standard recognizes the importance of protecting the watershed by ensuring that development within the watershed contributes to the maintenance of water quality.

Staff will be available at the July 17, 2007 work session to further discuss the proposed amendment. Staff recommends that the Planning Commission recommend approval of the proposed change to the Board of Supervisors.

C: Lane B. Ramsey, County Administrator
M.D. "Pete" Stith, Deputy County Administrator for Community Development
Kirkland A. Turner, Director of Planning

AN ORDINANCE TO AMEND THE <u>CODE OF THE COUNTY OF</u> <u>CHESTERFIELD</u>, 1997, AS AMENDED, BY AMENDING AND RE-ENACTING SECTION 19-238 OF THE ZONING ORDINANCE RELATING TO WATER QUALITY REQUIREMENTS IN THE UPPER SWIFT CREEK WATERSHED

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That Section 19-238 of the <u>Code of the County of Chesterfield</u>, 1997, as amended, is amended and re-enacted to read as follows:

Sec. 19-238. Development regulations.

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- (d) (1) Stormwater runoff shall be controlled to achieve the following:
 - a. For any new use or development, the post-development, nonpoint-source pollution runoff loads of phosphorous and lead shall not exceed the following:
 - (i) Phosphorus:
 - 1. The post-development total phosphorus load for all land uses except agricultural practices residential uses located in areas identified in the Midlothian Area Community Plan for low density residential (1.01 to 2.0 units per acre), in the Route 288 Corridor Plan for Residential (1 to 2.0 dwellings per acre), and in the Upper Swift Creek Plan for single family residential: (2.0 units/acre or less), shall not exceed 0.22 0.16 pounds per acre per year.
 - 2. The post-development total phosphorus load for all other uses shall not exceed 0.45 pounds per acre per year.

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(2) That this ordinance shall become effective immediately upon adoption.



Meeting Date:	August 22, 2007	Item Number: 1	6.C.
	ic Hearing to Cong e Water Assessmen	sider an Ordinance to Establis nt District"	h the "Knollwood
County Administr	rator's Comments:		
County Administr	rator:		
the attached of District", app from the water average yield maturity of or	ordinance to esta propriate funds in fund balance, an on United States	requests that the Board of Sublish the "Knollwood Drive Won the amount of \$166,300.00 d set the interest rate based Treasury securities adjusted vailable by the Federal Research adopted.	ater Assessment for the project on the index of d to a constant
Summary of Inf	ormation:		
Several property owners on Knollwood Drive, in the Bon Air Terrace subdivision, in the Midlothian District, have approached the County with a request to have the public water system extended to serve the existing homes on a portion of Knollwood Drive. Those property owners have requested that a twenty-two (22) lot assessment district be established to fund the necessary water line extension. A boundary map and vicinity map of the proposed water assessment district is attached.			
If an assessment district is created, the County will initially pay all engineering, easement acquisition, construction and other costs to extend public water lines and will then recoup the cost from the property owners. The water assessment on each lot may be repaid in a lump sum or over a 20-year period in semi-annual installments. The property owners will also pay interest at a rate which will be the index of average yield on United States Treasury securities adjusted to a constant maturity of one year as made			
Preparer: William	O. Wright	Title: Assistant Director of Utilitie	<u>s</u>
Attachments:	Yes	No	[#] 000366

Page 2 of 3

available by the Federal Reserve Bank at the time the assessment ordinance is adopted. Property owners aged 65 years or older, who live on their property, may have their assessment payments deferred until they no longer own the property. A lien in the total amount of the assessment for each property will be recorded.

The total estimated cost for the proposed water line extension is \$166,300.00. The proposed "Knollwood Drive Water Assessment District" would include twenty-two (22) lots, with the assessment per lot being \$7,559.10. The Utilities Department has received signed survey forms from the owners of twenty (20) properties indicating their support, which represents 91% of the properties to be included in the proposed assessment district. A list of the property owners and assessments is attached.





Meeting Date: August 22, 2007

Budget and Management Comments:

This agenda item requests that the Board hold a public hearing to consider an ordinance to establish the Knollwood Drive Water Assessment District. This item also requests that the Board authorize the appropriation of funds in the amount of \$166,300.00 for the water line extension project and set an interest rate at the index of average yield on United States Treasury Securities adjusted to a constant maturity of one year as made available by the Federal Reserve Bank at the time the assessment ordinance is adopted. Funding in the amount of \$166,300.00 is available in the water fund balance to appropriate to the water line extension project.

Preparer: Allan M. Carmody Title: <u>Director, Budget and Management</u>

AN ORDINANCE CREATING THE KNOLLWOOD DRIVE SPECIAL TAX OR ASSESSMENT WATER DISTRICT, IMPOSING ASSESSMENT AGAINST LAND OWNERS IN THE DISTRICT AND PROVIDING FOR SUSPENSION OF PAYMENT FOR CERTAIN ELDERLY OWNERS

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That the Knollwood Drive Special Tax or Assessment Water District is created as follows:

Section 1. Definitions.

In the context of this ordinance, the following words shall have the following meaning:

District: Knollwood Drive Special Tax or Assessment Water District.

Map of the District: The map entitled "Knollwood Drive Water Assessment District" prepared by the County Department of Utilities, which map is on file with the director of utilities.

Section 2. Establishment of the Knollwood Drive Special Tax or Assessment Water District.

Pursuant to Code of Virginia, Section 15.2-2404 et seq., there is hereby created in the county the Knollwood Drive Special Tax or Assessment Water District. The area of the district shall be and the same is hereby fixed within the boundaries depicted on the map of the district.

Section 3. Construction of certain water facilities in and adjacent to the district.

The utilities department shall cause to be constructed in and adjacent to the district the water line and appurtenant facilities depicted on the map of the district.

Section 4. Taxes or assessments upon owners of property located within the district.

The cost of construction of the water line and appurtenant facilities located within the district shall be apportioned among the owners of property abutting the water line. The amount of the tax or assessment charged to each such owner shall be one twenty-second (1/22) of the total cost of the improvements constructed within the district, including the legal, financial and other directly attributable costs incurred by the County. The one twenty-second (1/22) charge shall be assessed against each lot located in the district. The amount finally taxed or assessed against each landowner shall be reported to the treasurer as soon as practicable after completion

of the water line and appurtenant facilities located within the district, and the treasurer shall enter the same as provided for other taxes.

Section 5. Installment payment of assessments.

Any person against whom an assessment provided for in this article has been finally made shall pay the full amount of the assessment provided for in this article, on the due date of the first tax bill on which such assessment is shown. In no event, however, shall any part of the assessment be due prior to the completion of the water line and appurtenant facilities constructed pursuant to this article. As an alternative to payment as provided above, a person against whom an assessment provided for in this article has been made may pay such assessment in forty (40) equal semiannual principal installments over a period of twenty (20) years, together with simple interest on the unpaid principal balance at an annual rate equal to the index of average yield on United States Treasury Securities adjusted to a constant maturity of one year as made available by the Federal Reserve Bank on the date when this ordinance was adopted. The first of such installments shall be due on and interest on the unpaid principal balance shall accrue from the date on which the full amount of the assessment would otherwise have been due as provided above.

Section 6. Suspension of payment of assessments.

Payment of assessments otherwise due under this ordinance shall be suspended for any owner who owned property on the day the ordinance creating the assessment district was adopted and who occupies a residential building located on the property and is 65 years of age or older. However when the property is no longer occupied by a person who is 65 years of age or older or is conveyed to another person or persons, irrespective of the age of the person or persons to whom the property is conveyed, the suspension of payments shall cease and the entire assessment, including accrued interest, shall be immediately due and payable. It shall be the obligation of any such owner to provide a driver's license or other photo identification establishing proof of age satisfactory to the director of utilities in order for such suspension to become effective.

Section 7.

This ordinance shall not be set out in the County Code but shall be kept on file in the office of the director of utilities.

(2) This ordinance shall be in effect immediately upon its adoption.

Proposed "Knollwood Drive Water Assessment District"

Owner name	Property Address	<u>GPIN</u>	<u>Assessment</u>
Vicheth K. Yuon and S .C. Miem	1306 Knollwood Drive	747-711-1872	\$7,559.10
Hiroko O. Tomlinson	1312 Knollwood Drive	747-711-2180	\$7,559.10
Henry and Nina P. Overby, Jr.	1313 Knollwood Drive	747-711-4169	\$7,559.10
Katherine E. Smith	1318 Knollwood Drive	747-711-2586	\$7,559.10
Osman Cedilla Diaz	1400 Knollwood Drive	747-711-2993	\$7,559.10
Ronald A. and Joyce T. Clark	1401 Knollwood Drive	747-711-5182	\$7,559.10
James E. and Carolyn M. Collins	1406 Knollwood Drive	747-712-3300	\$7,559.10
Louise Smith Farmer	1407 Knollwood Drive	747-711-5489	\$7,559.10
William A. Keim	1412 Knollwood Drive	747-712-3707	\$7,559.10
Albert S. and Phyllis D. McIntire	1413 Knollwood Drive	747-711-5797	\$7,559.10
J. Carol Whitmore	1418 Knollwood Drive	747-712-4015	\$7,559.10
Ashok Bhaisora	1419 Knollwood Drive	747-712-6204	\$7,559.10
Vicky C. Worsham	1500 Knollwood Drive	747-712-4627	\$7,559.10
Lafayette Investors LLC	1501 Knollwood Drive	747-712-6915	\$7,559.10
Maurice Rhett Costello	1506 Knollwood Drive	747-712-5133	\$7,559.10
Timothy E. and Tina E. Haskins	1507 Knollwood Drive	747-712-7223	\$7,559.10
Elizabeth B Unroe	1512 Knollwood Drive	747-712-5540	\$7,559.10
Marian A. Knowles	1513 Knollwood Drive	747-712-7630	\$7,559.10
Susan E. Murphy (see Note 1)	1518 Knollwood Drive 1600 Knollwood Drive	747-712-5848 747-712-6255	\$7,559.10
Eva S. Burd	1612 Knollwood Drive	747-712-6969	\$7,559.10
Robert A. and Brenda S. Brandau	1615 Knollwood Drive	747-712-9057	\$7,559.10
Robbie and Trina Sutherland	1616 Knollwood Drive	747-712-6662	\$7,559.10

(**Note 1:** This property owners' house encumbers both lots, as it straddles the common property line. The Utilities Department has considered this as a "single lot" in setting up the assessment district. The County tax assessment for 1518 Knollwood Drive is for the house and that lot. The tax assessment for 1600 Knollwood Drive is for that lot only.)

KNOLLWOOD DRIVE WATER ASSESSMENT DISTRICT MARCH HARTE DR THE VINELANDRO HUNTERSDELLAR ROBIOUS RD

Chesterfield County

Department of Utilities

1 inch equals 200 feet

Proposed Wateline

Proposed Parcels for

Assessment District
Proposed Assessment District
Denotes Property Owner

in Support

KNOLLWOOD DRIVE WATER ASSESSMENT DISTRICT





Chesterfield County Department of Utilities

1 inch equals 700 feet



June 11, 2007 1 inch equ



Meeting Date:	August 22, 2007		tem Number: 16.	D.
Subject:				
	to Consider Amen to the Collection	_		
County Administra				
Board Action Requ Public hearing	\mathcal{D}			
case when a coordinance. Und Treasurer and m funding courtho	ormation: Inty ordinance im defendant is conder State law, to must be appropriate ouse security per other personal	nvicted of a he fees collecated by the Boatersonnel, and,	violation of a ted are remitted ard to the Sheri upon request o	any statute or d to the County ff's Office for of the Sheriff,
fee to \$10.00.	al Assembly amend The Sheriff's to further enhand	Office support	s the proposed	increase in the
	007, the Board the County Code		_	ng to consider
A copy of the p	proposed ordinand	ce is attached		
Preparer: Steven	L. Micas		Title: County Attorn	ey 75980.1)
Attachments:	Yes	No		# 000374

AN ORDINANCE TO AMEND THE <u>CODE OF THE COUNTY</u> <u>OF CHESTERFIELD</u>, 1997, AS AMENDED, BY AMENDING AND RE-ENACTING SECTION 9-132 RELATING TO THE COLLECTION OF FEES FOR COURTHOUSE SECURITY

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That Section 9-132 of the <u>Code of the County of Chesterfield</u>, 1997, as amended, is amended and re-enacted to read as follows:

Sec. 9-132. Collection of processing fees for persons admitted to jail following conviction and fees for courthouse security.

- (a) (1) In addition to any other fees prescribed by law, a \$25.00 processing fee is hereby imposed on every individual admitted to the county or regional jail following conviction in a district or circuit court.
 - (2) This processing fee shall be ordered as a part of court costs collected by the clerk, deposited into the account of the county treasurer, and shall be appropriated to the sheriff to defray the costs of processing arrested persons into the jail.
- (b) (1) In addition to any other fees prescribed by law, a fee of \$5.00 \$10.00 is hereby imposed in each criminal and traffic case in which the defendant is convicted of a violation of any statute or ordinance. The clerks of the district and circuit courts shall charge and collect this fee as a part of the fees taxed as costs.
 - (2) After collection by the clerk of the court in which the case is heard, the fee shall be remitted to the county treasurer and held subject to appropriation by the county treasurer to be appropriated by the board of supervisors to the sheriff's office for funding courthouse security personnel, and, if requested by the sheriff, equipment and other personal property used in connection with courthouse security.
- (2) That this ordinance shall become effective immediately upon adoption.



Meeting Date: August 22, 2007

CHESTERFIELD COUNTY BOARD OF SUPERVISORS AGENDA

Item Number:

Page 1 of 2

16.E.

<u>Subject:</u>	
Public Hearing to Consider Amendments to <u>Chesterfield Count</u> 14-9 Relating to Carrying Loaded Firearms on Public Highway for a Penalty	ty Code Section s and Providing
County Administrator's Comments:	
County Administrator:	
Board Action Requested: Public hearing to consider amendments to Section 14-9 of t County Code relating to carrying loaded firearms on publi providing for penalty.	
Summary of Information: The current County ordinance regulates the carrying of loaded standing or walking on any part of a public highway when the authorized to hunt on the private property on both sides of the ordinance also provides certain exemptions from its provision.	e person is not he highway. The
The 2007 General Assembly amended the State enabling legislate the County's ability to regulate this activity. The Count authority to regulate only when the person is carrying the local purposes of hunting. Also, the State Code provides specific persons carrying loaded firearms in moving vehicles and for at the time in defense of persons or property.	nty now has the aded firearm for exemptions for
Preparer: Steven L. Micas Title: County Attorn	<u>ey</u> L(75981.1)
Attachments: Yes No	[#] 000376

Page 2 of 2

On June 27, 2007, the Board voted to hold a public hearing to consider amendments to the <u>County Code</u> reflecting the changes made to the State Code. The proposed ordinance incorporates the requirements of the State Code and must be adopted if the County wants to continue to regulate this activity.

A copy of the proposed ordinance is attached.

1305:76063.1(75981.1)

AN ORDINANCE TO AMEND THE <u>CODE OF THE COUNTY</u> <u>OF CHESTERFIELD</u>, 1997, AS AMENDED, BY AMENDING AND RE-ENACTING SECTION 14-9 RELATING TO CARRYING LOADED FIREARMS ON PUBLIC HIGHWAYS AND PROVIDING FOR A PENALTY

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) That Section 14-9 of the <u>Code of the County of Chesterfield</u>, 1997, as amended, is amended and re-enacted to read as follows:

Sec. 14-9. Same--Carrying loaded firearms on public highways.

- (a) No person shall carry or have a loaded firearm in his possession, for the purpose of hunting, while standing or walking on any part of a public highway within the county when such person is not authorized to hunt on the private property on both sides of the highway along which he is standing or walking. The provisions of this section shall not apply to (i) persons carrying loaded firearms in moving vehicles; (ii) persons acting at the time in defense of persons or property; or (iii) persons carrying firearms as permitted pursuant to the provisions of Code of Virginia, §§ 18.2-287.4 and 18.2-308.1 persons carrying loaded firearms for purposes other than hunting.
- (b) Any person violating the provisions of this section shall be guilty of a misdemeanor punishable by a fine of not more than \$100.00.
- (2) That this ordinance shall become effective immediately upon adoption.

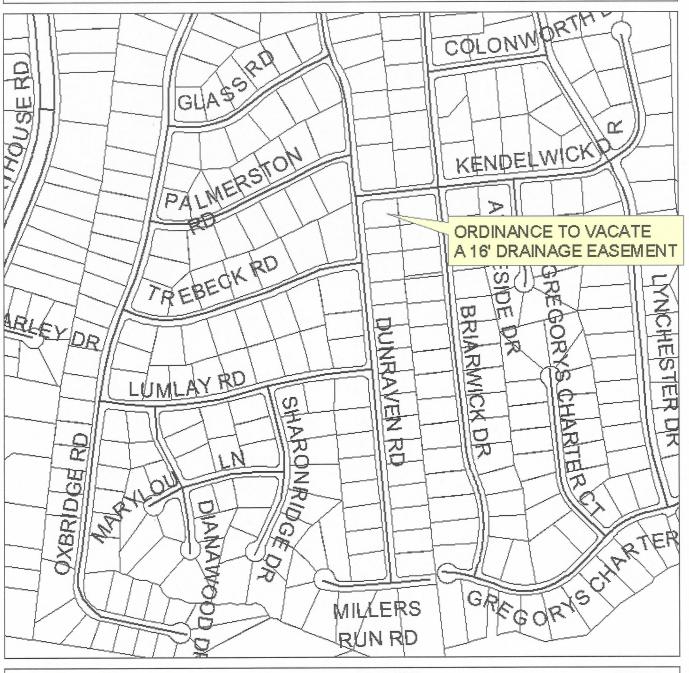
1305:75981.1



Meeting Date: August 22, 2007 Item Number: 16	S.F.			
Subject:				
PUBLIC HEARING: Ordinance to Vacate a Sixteen-Foot Drainage Lot 1, Block H, Mayfair Estates, Section B	Easement across			
County Administrator's Comments:				
County Administrator:				
Board Action Requested:				
Adopt an ordinance to vacate a 16' drainage easement across Lot 1, Block H, Mayfair Estates, Section B, as shown on the attached plat.				
Summary of Information:				
Raymond Cecil Kovas, Sr. and Laura L. Kovas have requested the 16' drainage easement across Lot 1, Block H, Mayfair Estate This request has been reviewed by staff and approval is reco	tes, Section B.			
District: Dale				
Preparer: John W. Harmon Title: Right of Way Mana	ager			
Attachments: Yes No	# 000379			

VICINITY SKETCH

PUBLIC HEARING: ORDINANCE TO VACATE A 16' DRAINAGE EASEMENT ACROSS LOT 1 BLOCK H MAYFAIR ESTATES SECTION B

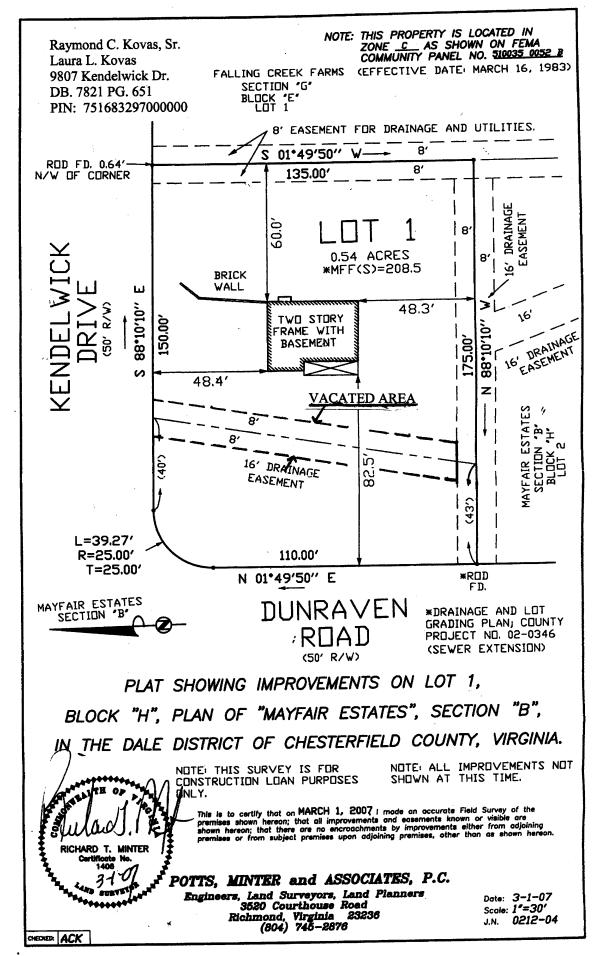




Chesterfield County Department of Utilities



1 Inch equals 416.67 feet

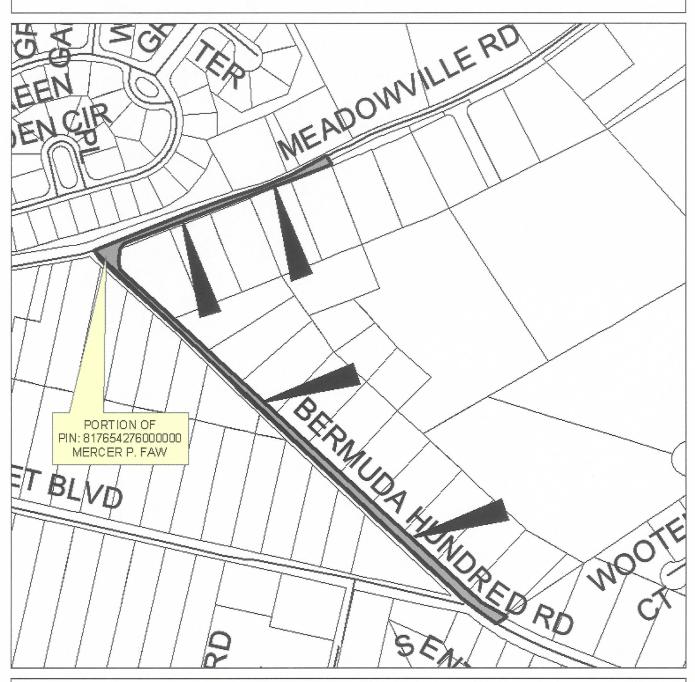




Meeting Date:	August 22, 2007	ltem Number: 1	6.G.
Subject:			
		ercise of Eminent Domain owville Road and Bermuda	-
County Administr	rator's Comments:		
County Administr	rator:		
Board Action Rec	<u>quested</u> :		
acquisition of Road (portion	f a parcel of land of PIN: 8176542760	to proceed with emine along Meadowville Road 000000) and authorizatio domain proceedings.	and Bermuda Hundred
Summary of In	formation:		
made to Merce purchase this and County sta other terms of Investment Corand Bermuda Papproximately lies between properties in road frontage approved withouse of emi	r P. Faw for a por property has not be aff and the owner can feel the purchase. The poration as additional additional acres, is appeared to be and one owner whom this acquisition of the count this acquisition in the domain for the property of the public roads and one owner whom the count this acquisition is the count domain for the property of the count domain for the property of	,021.20, which includes \$ ction of PIN: 8176542760 been accepted, no counter annot agree on the compens is parcel of land was seconal road right of way al 965 but was never dediproximately 2700' long, and fourteen homes. To coning ordinance because hose building permit appears to the second the second was a second to the second with the owner in an an enterior of the second to	on on one of the confer has been made sation to be paid or a taside by Woodvale ong Meadowville Road cated. It contains varies in width and there are seventeen they have no public plication cannot be sary to proceed with mers and the public.
District: Bermud	da		
Preparer:John	n W. Harmon	Title <u>: Right of Way</u>	Manager
Attachments:	Yes	No	# 000382

VICINITY SKETCH

PUBLIC HEARING: Consider the Exercise of Eminent Domain for the Acquisition of a Portion of PIN: 817654276000000 from Mercer P. Faw





Chesterfield County Department of Utilities

f hoh equals 29 1.67 feet



Meeting Date: August 22, 2007 Item Number: 1	I6.H.		
Subject:			
PUBLIC HEARING: Consider Leasing Space on the County's Bon	Air Tower		
County Administrator's Comments:			
County Administrator:			
Board Action Requested:			
Approve the leasing of space on the County's Bon Air Tower tinc.	o TTM Virginia,		
Summary of Information:			
Staff recommends that the Board of Supervisors approve the leasing of space on the County's Bon Air Tower. The lease term is for five years at \$24,000 per year with three 5 year renewal terms with 15% rent increases. Since the tower is located on State property, half of the rent will be paid to the Department of Juvenile Justice.			
District: Midlothian			
Preparer: John W. Harmon Title: Right of Way Mana	<u>ager</u>		
Attachments: Yes No	# 000384		



Meeting Date: August 2	2, 2007		Item Number: 1	9.
Subject:				
Adjournment and Notic	ce of Next	Scheduled	Meeting of	the Board of
County Administrator's Com	iments:			
County Administrator:				
Board Action Requested:				
Summary of Information	<u>:</u>			
Motion of adjournment and notice of the Board of Supervisors meeting to be held on September 26, 2007 at 3:00 p.m. in the Public Meeting Room.				
Preparer: <u>Lisa Elko</u>		Title: Clerk	to the Board	
Attachments:	Yes	No		#
				000385